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CONTENTS.

111

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1924

13

	Page.
Chapter I.— ¹³ Survey of public-school finance in the United States—By Fletcher H. Swift.....	1
Chapter II.—Some important school legislation, 1921 and 1922—By William R. Hood.....	35
Chapter III.—Higher education—By George F. Zook.....	63
Chapter IV.—Significant movements in city school systems—By W. S. Deffenbaugh.....	97
Chapter V.—Rural education—By Katherine M. Cook.....	125
Chapter VI.—Educational hygiene—By Willard S. Small.....	161
Chapter VII.—Educational extension—By Charles G. Maphis.....	197
Chapter VIII.—University summer schools—By James C. Egbert.....	229
Chapter IX.—Engineering education after the war—By Arthur M. Greene, Jr..	241
Chapter X.—Medical education—By N. P. Colwell, M. D.....	273
Chapter XI.—Agricultural education—By George A. Works.....	291
Chapter XII.—Secondary education—By W. S. Deffenbaugh.....	313
Chapter XIII.—Vocational education—By William T. Bawden.....	343
Chapter XIV.—Home economics education—By Henrietta W. Calvin.....	369
Chapter XV.—Kindergarten education—By Julia Wade Abbot.....	389
Chapter XVI.—The social studies in civic education—By Edgar Dawson...	403
Chapter XVII.—Art education—By Royal B. Farnum.....	419
Chapter XVIII.—Recent advances in instruction in music—By Will Earhart and Charles N. Boyd.....	439
Chapter XIX.—Recent developments in educational journalism—By W. Carson Ryan, Jr.....	461
Chapter XX.—The American teacher—By Homer H. Seerley.....	475
Chapter XXI.—Educational research—By Bird T. Baldwin.....	489
Chapter XXII.—Educational tests—By Stephen S. Colvin.....	565
Chapter XXIII.—Educational surveys—By Edward F. Buchner.....	593
Chapter XXIV.—Americanization in the United States—By John J. Mahoney.	637
Chapter XXV.—Recent development of parent-teacher associations—By Ellen C. Lombard.....	679
Chapter XXVI.—Educational work of the Young Men's Christian Association—By William F. Hirsch.....	693
Chapter XXVII.—Educational work of the Knights of Columbus—By Mark J. Sweany.....	719
Chapter XXVIII.—Educational work of the Young Women's Christian Association.....	731
Chapter XXIX.—Educational boards and foundations—By Henry R. Evans..	755
Chapter XXX.—Work of the Bureau of Education for the natives of Alaska—By William Hamilton.....	765
Index.....	769

CHAPTER I.

A SURVEY OF PUBLIC SCHOOL FINANCE IN THE UNITED STATES.

By FLETCHER HARPER SWIFT.

CONTENTS.—Educational developments following the great wars—Growth of school costs—Building expenditures—Federal policies in public-school finance—State policies in public school finance—A new conception of State aid—Reforms in apportioning State school funds—Need of new sources of revenue—Declining importance of State endowments—New sources of State school revenue—Tendencies in local support, county and district—The present situation.

Every great war in which the United States has played a part has been followed by educational developments of supreme national importance. As the result of the Revolutionary War the Federal Government acquired a vast public land domain from which it has made generous grants to the States carved out therefrom, and which became the foundation of systems of free public schools in no less than 30 of our States. The constitutions drafted by one State after another following the Civil War are eloquent with evidences of a newly created faith in public education. Although the lapse of more than half a century still finds educational provisions in the South far from adequate, the fact remains that not only in the South but in the North the Civil War was followed by educational efforts and movements amounting almost to a renaissance.

Although the United States was engaged in the World War less than two years, the effects upon education resulting from this brief period of warfare will perhaps prove to be as far-reaching and as important as those growing out of any previous war. For more than a quarter of a century educational leaders and men interested in our national welfare had been attempting to awaken the United States to the inadequacy of its educational provisions. The Federal census of 1910 and many National and State reports prepared thereafter had endeavored to awaken the intelligence and zeal of the citizens of the United States to the shocking extent of illiteracy, the failure of the States to make education universal, and the disasters awaiting American democracy if measures so inadequate were allowed to continue. But while State superintendents of schools spread broadcast their reports and appeals, and justified their ominous prophecies by the incontrovertible pronouncements of the Nation's greatest political thinkers from the beginning of our national existence to the present time, the people, or at least a large part of

that portion of the people which controls school levies, continued to point to newly erected urban school buildings, raised indignant protests at every suggestion of increasing school rates, and pleaded poverty and overtaxation.

There is little reason for thinking that affairs might not have continued thus indefinitely had not the World War finally extended its octopus clutch over the United States also. To be sure, social and educational leaders had labored courageously and with some success; but it was not until American Army officers found it necessary to have their orders shouted to American privates in three, four—yes, and even five—languages that America awoke, awoke to the fact that in a country whose laws, whose very ideals were written in English, thousands upon thousands of adult citizens could not read a single word of the language of their adopted country. The first selective draft showed that there were 700,000 illiterates in the United States between 21 and 31 years of age, and that 29 per cent of the total number of men actually examined were physically unfit for military service. Worse still, thousands upon thousands of children were discovered to be growing up amid conditions which debarred them from any chance of securing even the rudiments of an education.

The realization that came with this awakening was at first undefined and bewildered. Yet, although vague and confused, it was animate and pregnant with possibilities. It led at once to a demand that both the causes and the remedy be discovered. The causes were not difficult to determine. Indeed, as already indicated, they had been set forth again and again by the educational leaders of nearly every State in the Union. Briefly stated, they were these: Inequalities in educational opportunities, inequalities in zeal for public education, inequalities in taxable wealth from which school revenues were derived.

Even a most cursory survey of educational conditions in 1918, the last year of the war, will reveal ominous inequalities not only among our 48 States but among the counties and districts within the same State. Thus, whereas the State of Montana spent in that year over \$80 on each pupil attending school, Mississippi spent only \$12. Again, whereas the minimum legal school year in New York State and in Connecticut was nine months, in Arkansas it was six months and in South Carolina less than six months.

Undoubtedly the World War was the most important factor in awakening the American public to the inadequacy of its educational provisions and in arousing the States to vigorous efforts to improve educational conditions. However, in this connection mention should be made of a little volume put forth in 1918 by the Russell Sage Foundation, written by Leonard P. Ayres and entitled "An Index

Number for State School Systems." This was one of the first attempts yet made to assign an educational rank to each of the States in the Union. The effect produced by this volume, particularly upon the States ranked low by Ayres, can probably never be measured. One State after another, through its governor or other public leaders, was aroused to the inadequacy of its educational provisions. Investigations were demanded and made, to be followed by legislation providing longer school terms, increased salaries for teachers, and larger funds.

It must not be thought that the post-war wave of educational enthusiasm and the resulting efforts at improvement were confined to any one group of States or to States where educational standards were relatively low. On the contrary, the movement has extended from New York to Louisiana and from Maine to Washington. The fundamental characteristic of this movement has been a demand for greatly increased educational opportunities and for the equalization of these opportunities as nearly as possible. The realization that the fulfillment of such demands would be possible only through the provision of greatly increased revenues led one State after another not only to provide larger funds but to endeavor to discover new sources of school revenue and methods and policies of school finance which would bring about a greater equalization than hitherto prevailed, both of funds and of the burdens of school costs.

From these preliminary observations we may now turn to consider more definitely the most important events and tendencies affecting public school finance in the United States during the biennium 1920-1922. Our account may well begin with a consideration of the increase in school costs and the reasons for the same. Following this we shall direct attention, first, to the trend of school finance policies, Federal, State, and local; second, to the results of these policies; third, to the present critical situation; and, fourth, to the outlook for the future.

GROWTH OF SCHOOL COSTS.

A study recently made by the research division of the National Education Association shows that 30 States whose aggregate total expenditure for all school costs (except debt service) in 1920 was \$760,898,253 spent in the year 1921-22 \$1,117,129,569, an increase of 46.82 per cent. A similar study by the writer of the present account, covering 11 States, 3 of which (Kansas, New Hampshire, and Tennessee) were not included in the National Education Association study, revealed an increase for the same period of approximately 46 per cent. The total amount expended for the public schools in the United States in the year 1920 was \$1,036,000,000. Assuming that the average increase in total expenditure for public schools

in the United States from 1920 to 1922 was 46 per cent, we find that the estimated expenditure for all public-school costs in the United States, exclusive of debt service, in the year 1922 would amount to approximately \$1,526,000,000. In the year 1870 the United States spent approximately \$63,000,000 on public schools, and assuming that in the year 1922 we spent \$1,526,000,000, we have an increase of 2,322 per cent.

In 1890 our total expenditure for public schools amounted to \$141,000,000; in 1900, to \$215,000,000; in 1910, to \$426,000,000; and in 1920, to \$1,036,000,000. The moneys spent for public schools in 1920 represent an increase of 36 per cent over the amount spent in 1918, and the estimated total expenditure in 1922 represents an increase of 46 per cent over 1920. These vast increases are the result of the interaction of many important factors—the rapid increase in school population, the lengthening of the school year, the placing by the community upon the school of a larger and larger number of functions, resulting in the introduction of many new types of studies and activities, and finally and, we may note, as far as the biennium 1920-1922 is concerned, perhaps the most important cause of all, the increase in the cost of living and the consequent decrease in the purchasing power of the dollar.

The first of the above causes which concerns us is the enormous increase in the number of children for whom the United States is providing public elementary and secondary education and the great increase in the amount spent for each school child educated at public expense. The fact that the population of the United States increased from approximately 63,000,000 in 1890 to 106,000,000 in 1920 would in itself result in a great increase in the school population and school costs. In 1890 there were approximately 8,000,000 children in average daily attendance upon public schools in the United States; in 1920 there were 16,000,000. In 1890 the average annual expenditure for each child in average daily attendance was \$17; in 1920 it was \$65. The per cent of increase in the total expenditure for public schools, 1890-1920, was 711. For this same period the number of children in average daily attendance increased 98 per cent and the average annual expenditure per child 272 per cent. Let us now consider briefly some of the most important reasons contributing to this increase in school attendance and school costs other than the increase in the total population of the United States.

The number of children attending public school and, consequently, school costs have greatly increased during the last quarter of a century, due to the enactment of compulsory school laws and by the ex-

tension of the school age. In 1894-95, according to the Commissioner of Education, there were 19 States which had no compulsory school law. In 1920 there was not a single State in the Union which did not have included among its statutes a compulsory school law. It is scarcely necessary to add that the degree of effectiveness with which these laws have been enforced has steadily increased throughout the past 25 years, with the result that a larger and larger percentage of children of school age has been found within the public schools. Not only is this true, but a comparison of the compulsory school age in those States which in the year 1895 had a compulsory school law with the compulsory school age in these same States for the year 1918 shows that while in New Hampshire the compulsory school age had decreased two years and in New Mexico one year and in five States it had remained unchanged, in 18 States it had increased all the way from one to four years. In this connection attention should be called to the fact that the length of the average school year in the United States increased from 130 days in 1880 to 135 days in 1890 and 162 days in 1920.

Another factor which has played a large part in the increase of school costs in the United States is the multiplication of high schools and an unprecedented growth of high-school attendance. How important these factors are can be better understood by a comparison of what it costs to educate a high-school pupil with what it costs to educate an elementary-school pupil. In 1918 the average cost in the United States per elementary school pupil enrolled was \$31.66; per high-school pupil enrolled, \$84.48. It should be borne in mind that in 1918 the United States was in a period of retrenchment due to the World War, and although this period of retrenchment was by no means past in 1920, yet the expenditure per elementary pupil and per high-school pupil was approximately double that of the year 1918, being, in fact, \$64.03 per elementary pupil enrolled and \$158.21 per high-school pupil enrolled. From these facts we see that it costs approximately two and one-half times as much to educate pupils attending high schools as pupils attending elementary schools. These facts became of great significance in attempting to determine the reasons for mounting costs in education when we discover that seven times as large a proportion of our total population was attending high school in 1920 as was attending high school in 1890. More specifically, in 1890 three-tenths of 1 per cent of the total population in the United States was enrolled in high school, whereas in 1920 2.1 per cent was enrolled. In the year 1890 approximately 3 persons out of every 1,000 individuals in the United States were enrolled in high school; in 1920 21 persons out of

every 1,000. The trend becomes even more impressive when we turn our consideration from the total population to that portion of it actually enrolled in school. In 1890, out of every 1,000 children enrolled in school, only 16 were in high school; in 1920, out of every 1,000 children enrolled, 102 were enrolled in high school. Finally, we discover that, whereas in 1890 the United States was spending \$1,759,065, in 1920 her expenditure on public high schools, excluding all cities of less than 10,000 population, and excluding also costs of administration, capital outlay, and debt service, was \$66,024,307.

In considering increases in school population and school costs which have marked the past quarter of a century, the fact must not be overlooked that no less than 10 States have been admitted into the Union since 1888. Four of these States were admitted in the year 1889 and the remaining six from 1890 to 1912. The rapid development of these new States, their growth in population, and particularly the fact that they came into the Union possessed with marked zeal for public education and vast Federal endowments stimulated them to establish and maintain high standards as to the accessibility and quality of the educational facilities they provided.

It is impossible in the present brief account to give the consideration merited by a number of other causes which, combined with those already mentioned, have steadily forced upward expenditures for public schools. Reference was made in a previous paragraph to the expansion of the course of study, to the development of vocational education and the establishment of continuation classes, and to the fact that a great number of new projects and new responsibilities have been assumed by the public schools. New conceptions of what our public schools must endeavor to do for the millions of children who, year after year, pass in and out of their schoolrooms have led to an expansion of the course of study and to the attempt on the part of our public schools not only to provide new types of instruction but to provide many types of physical care almost undreamed of by the directors of public education a quarter of a century ago. Some of the projects well-nigh unthought of at that time but which the public schools of to-day are undertaking are suggested by the following list: School doctors, nurses, dental clinics, psychological clinics, open-air schools, supervised play, special schools and classes for blind, deaf, crippled, and mentally backward or deficient children, truant officers, home visiting teachers, city systems of public kindergartens, extensive programs of physical and health education, free textbooks, and continuation classes for minors engaged in industry.

To these causes must be added three others: A steady rise in the educational and professional qualifications demanded of public-school

teachers, necessitating a steady increase in the salaries paid, and a similar continual rise in building and equipment standards. A final cause, and one which is frequently overlooked by the public, is the depreciation of the purchasing power of the dollar.

In 1913 the United States spent for public schools approximately \$522,000,000; in 1918, \$763,000,000; in 1920, \$1,036,000,000; and in 1922 (estimated), \$1,526,000,000. Taken by themselves, these expenditures for 1918, 1920, and 1922 indicate a vast increase over that of 1913, but if compared with the total expenditure for 1913 on the basis of the purchasing power of a dollar in these respective years, it will be found that in 1918 and 1920 they represent an actual decrease, as the following table shows:

TABLE 1.—Total expenditures for public schools in the United States.¹

Year.	Actual total expenditure (millions of dollars.)	Index of cost of living. ²	Purchasing power of total expenditure ³ (millions of dollars).
	A.	B.	C.
1913.....	522	100	522
1918.....	764	174	438
1920.....	1,036	200	518

¹ For all costs except debt service.

² Formula used in computing items in column C: $C = A + \frac{B}{100}$.

³ Index figures taken from Nat. Educ. Assoc. Research Bul., Vol. I, No. 2, p. 84.

From Table 1 we see that the \$764,000,000 spent in 1918 had the power to purchase only what \$438,000,000 would have purchased in 1913, and that the \$1,036,000,000 spent on public schools in 1920 had the power to purchase only what \$518,000,000 would have purchased in 1913. In other words, in terms of the purchasing power of money, the United States spent \$84,000,000 less on public schools in 1918 than in 1913 and \$4,000,000 less in 1920 than in 1913. The inadequacy of the expenditure in 1918 and 1920 becomes even more evident when we discover that there were nearly 2,000,000 more children in average daily attendance in the public schools of the United States in 1918 than in 1913 and more than 2,500,000 more in 1920 than in 1913. It is easy to forecast that, however much the actual expenditure per school child in 1918 and 1920 exceeded that of 1913, in actual purchasing power the expenditure per pupil must have been considerably less. This statement is borne out by the facts presented in Table 2.

TABLE 2.—Decline in average annual expenditure per child as measured by purchasing power of the dollar, 1913-1920.

Year.	Index of cost of living.	Millions of children in average daily attendance.	Average annual expenditure.	Purchasing power of average annual expenditure.
			Per child in average daily attendance.	
1913.....	100	13.6	\$38.31	38.31
1918.....	174	15.5	49.12	28.23
1920.....	200	16.2	64.16	32.08

From Table 2 we see that although the United States spent in 1918 one and three-tenths times as much per school child as in 1913, and one and seven-tenths times as much in 1920, in actual purchasing power she spent \$10 less per child in 1918 and \$6 less in 1920 than in 1913.

With respect to teachers' salaries the facts and conditions are in complete harmony with those already presented regarding total expenditure and expenditure per child. The average salary of teachers in the United States was \$515 in 1913, \$635 in 1918, and \$837 in 1920. The purchasing power of these respective average salaries was \$515 in 1913, \$365 in 1918, and \$418 in 1920. (National Education Association, Research Bulletin, Vol. I, No. 2, March, 1923, p. 84.)

Even a cursory consideration of the facts presented in the last few paragraphs will show that if the States were to make any genuine progress it would be necessary for them to greatly increase their expenditures. Before the schools could be relieved of the large numbers of teachers whose preparation was in many cases not only meager but far below the minimum legal qualifications, and before communities could make any headway with their disastrously retarded building programs, money would have to be spent in rapidly increasing sums. That this is what actually took place during the biennium 1920 to 1922 is evident from the fact already noted that the expenditure for public schools in 1922 was 46 per cent in advance of the expenditure in 1920. Assuming as the total expenditure in the year 1922 the sum \$1,526,000,000, estimated as explained in a previous paragraph, we find that in 1922 the United States spent approximately \$490,000,000 more on public schools than in 1920 and more than three times as much as was spent in 1913. From 1920 to 1922 the index of the cost of living decreased from 200 to 170, with the result that \$1,526,000,000 had the power of purchasing what \$897,000,000 would have purchased in 1913. Thus we see that, whereas the actual purchasing power of the total amount of money

expended for public schools in 1918 and in 1920 was less than that expended in 1913, the purchasing power of the estimated total amount of expenditures on public schools in 1922 was one and seven-tenths times that spent in 1913.

A study of the expenditures of 14 States for the year 1921-22 showed that their aggregate total expenditure amounted to \$536,493,396. Of this total expenditure, 80.4 per cent was devoted to current expenses and 19.6 per cent to capital outlay, the largest item of which was new buildings. Contrast with this the fact that in 1890 only 18.6 per cent of total public-school expenditures were devoted to outlays; in 1900, 16.5 per cent; in 1910, 16.41 per cent; and in 1920, 14.8 per cent. It is evident that no small part of the unprecedented increase in school costs during the year 1922 was due to greatly increased building outlays. This is a matter of sufficient importance to demand somewhat further consideration.

BUILDING EXPENDITURES.

The general building situation is set forth in the following statement from a recent bulletin issued by the Bureau of Education:

Even before our entry into the World War there was lack of adequate school accommodations in the country and with the almost total stoppage of construction during the war there was by the end of 1920 a widespread want.

This general statement might be supported by quotations from the official school reports of nearly every State in the Union. The annual report of the Maryland State Board of Education, 1920, page 33, contains the following significant statement:

Building operations throughout the State were practically suspended with our entry into the war in 1917, and, on account of the cost of labor and materials, were not fully resumed during 1920, although 19 per cent of the total school expenditures in the counties was devoted to capital outlay or debt service. In normal times a school system usually devotes about 20 per cent of its total expenditure to building purposes, the remainder to current expenses.

Let us take two other examples, New Hampshire and Massachusetts. In 1906, 1907, and 1908 Massachusetts devoted approximately from 18 to something over 19 per cent of her total school expenditures to outlays. In 1917 the per cent had fallen to 14.36; in 1918, to 12.9; and in 1921, to 8.9. In 1922 her expenditure for outlays continued far below normal, being, in fact, only 9.8. New Hampshire devoted only 3.4 per cent of her total public school expenditures to building costs in 1918, 3.6 per cent in 1920, and 4.6 per cent in 1922. But while individual States, such as Massachusetts and New Hampshire, were still in 1920 and 1922 far behind in the per cent of their total expenditures devoted to building programs, from such data as are available it seems safe to assume that the majority of the States

were making genuine progress in catching up with their building needs. Thus we find that in 1920 Florida devoted 14.8 per cent of her expenditures to outlays; Tennessee, 15.7 per cent; Minnesota, 20.5 per cent; Nebraska, 13.8 per cent; Kansas, 14.3 per cent; Idaho, 23.3 per cent; and Nevada, 13.2 per cent. In 1922 Maryland devoted 17.6 per cent of her total expenditures to outlays; Florida, 12.3; Tennessee, 12.6; Minnesota, 25; Kansas, 17.9; and Washington, 17.4. One of the greatest obstacles in the way of carrying out building programs was the failure of many bond issues to attract buyers. This situation might be met by offering higher rates of interest or by selling bonds below par. One of the most interesting and significant building policies inaugurated during the biennium 1920 to 1922 was that provided for by North Carolina by an act passed March 17, 1921. This act provided for a State bond issue of not over \$5,000,000, the proceeds to be used for establishing in the State treasury a special building fund to be loaned to county boards of education to aid in the erection of schoolhouses. The law provided that no loan shall be made for a building of less than five rooms and that plans for buildings must have the approval of the State superintendent of public instruction.

Despite the increase in school expenditures for 1922 and the increase in the per cent of the total expenditures devoted to school buildings, the present writing finds school accommodations, taking the United States as a whole, far from adequate. A bulletin prepared by the Bureau of Education for American education week, December 3 to 9, 1922, reads, in part, as follows:

Probably never in the history of this country has there been such need for school building construction as at the present time. Lack of adequate school building accommodations in the period before the war and the almost total stoppage of all school building during the war have brought about a state of school-building congestion that is a menace to the health, strength, and intelligence of the children of this country. From the data that the bureau has been able to gather it is reasonable to assume that at least one-half the children of the country are housed in buildings nearly one-quarter of a century old. This means that more than one-half the children are housed in buildings that have practically none of the educational facilities of a modern school plant. Furthermore, these buildings are not fireproof, as it has been found that only 5 per cent of the total number of buildings in cities of 8,000 and over are of fireproof construction. About 10,000,000 of the 21,462,133 children in the country have inadequate housing facilities, and this is doubtless an underestimate. This means that it would be necessary to erect immediately 250,000 classrooms at a minimum cost of \$3,000,000,000.

This is a sum approximately three times that of the total amount expended for all public-school purposes in 1920.

We have now considered two of the major aspects of public-school finance characterizing the biennium 1920 to 1922, namely, (1) the

increasing costs of public schools and (2) the reasons for the same. Let us now turn to the third aspect of the situation, namely, the financial policies and tendencies characterizing this period.

FEDERAL POLICIES IN PUBLIC SCHOOL FINANCE.

Of the policies characterizing public education in the United States during the past 10 years, perhaps none has attracted more universal attention than that of Federal aid. The Smith-Lever Act, providing Federal subventions for extension work in agriculture and home economics, was approved May 8, 1914. On February 23, 1917, the Smith-Hughes vocational education law was passed, which marked the entrance of the Federal Government upon a national policy of subsidizing vocational education. This law was followed by the Smith-Sears Act, approved June 27, 1918, and the Smith-Bankhead Act, June 2, 1920; the former provided funds for the vocational rehabilitation of disabled soldiers and sailors, and the latter funds for the vocational rehabilitation of civilians disabled in industry or otherwise.

The most notable development within the field of Federal aid during the past biennium has been the attempt to induce the National Government to enter upon a policy of large Federal aid to public schools. This attempt found expression in 1918 in the Smith-Towner bill. This bill attempted to place upon the Federal Government the responsibility of evening out educational inequalities existing among the States by reason of their inequalities in financial resources, differences in educational history and in standards. It recognized that the Nation was confronted by an unprecedented or, at least, a heretofore unrecognized problem. It provided for the creation of a Federal department of education and for an annual grant from the Federal Government of \$100,000,000 for (1) equalizing educational opportunities, (2) reducing illiteracy, (3) Americanization work, (4) teachers' training, (5) physical education and recreation. In each case the amount furnished by the National Government was to be matched by the State. The Smith-Towner bill failed of passage and was succeeded by the Towner-Sterling bill, which attempted to embody in revised form the major aims and principles of the Smith-Towner bill, but which, like its predecessor, failed to pass. The bitter conflict waged about the Smith-Towner and the Towner-Sterling bills shows clearly that any attempt to inaugurate a policy of large Federal aid to public schools will meet bitter and well-organized opposition. What the future has in store no one would venture to prophesy. If these bills have served no other purpose, they have at least forced the citizens of the United States

to a realization of the national importance of education and to an appreciation of the fact that the educational conditions in one State are the concern of all.

The most important current funds at present provided by the Federal Government the proceeds of which are devoted at least in part to public schools include the following: Per centum grants, Smith-Hughes subventions, Federal forest-reserve county funds, and moneys derived from the Federal mineral royalty grant of 1920. To this list may well be added Smith-Lever subventions, for although not a dollar of Smith-Lever money reaches the public schools, the work is carried on partly among children of school age. A complete account of these funds will be found in a bulletin recently issued by the Bureau of Education on Federal Aid to Public Schools (Bureau of Education, Bulletin, 1922, No. 47). It will therefore suffice at this point to give these funds only a brief consideration.

Per centum grants, or funds, have their origin in the policy adopted by Congress upon the admission of Ohio into the Union in the year 1802, of granting to public land States a certain per cent of the proceeds of the sales of lands belonging to the United States sold after the State's admission to the Union. These grants are made on condition that no taxes of any kind shall be levied by the State upon lands sold by the Federal Government for a period of five years after the date of the sale. Up to June 30, 1920, the United States had paid in aggregate to the States entitled to percentum grants no less than \$16,792,261.

Chapter 192 of the Acts of Congress, May 23, 1908, provides that hereafter 25 per cent of all moneys received from each forest reserve during any fiscal year shall be paid to the State or Territory in which said reserve is situated, to be expended as the State or Territorial legislature may prescribe for the benefit of public schools and public roads of the county or counties in which the forest reserve is situated. Twenty-nine States contain national forest reserves in areas varying all the way from approximately 19,000,000 acres in California to 18,000 acres in South Carolina. The income is derived chiefly from the sale of forest reserve timber and from fees paid for grazing rights. The Federal forest reserve moneys paid to the States and to Alaska amounted in 1920 to \$1,180,065; in 1921, to \$1,023,082; in 1922, to \$846,443. The aggregate amount of Federal forest reserve moneys paid by the United States from 1906 to 1922 was \$11,149,092.

During the year 1920 Congress passed an act entitled "An act to promote the mining of coal, phosphate, oil, oil shale, gas, and sodium on the public domain." This act, approved February 23, 1920, provides that public land States in which are situated Federal lands con-

taining nonmetallic mineral deposits of the classes covered by the act are entitled to 20 per cent for past production and to 37½ per cent for future production of the moneys paid to the United States as bonuses, royalties, and rentals from the lease of such lands, providing that all moneys accruing to the United States from land within the national petroleum reserve shall be deposited in the United States Treasury as miscellaneous receipts.

The oil and mineral leasing act is of special interest in view of the fact that it is the most recent grant of its kind. Because of the nature of the grants provided, it follows that this act will affect only a limited number of States, and of this limited number it would seem probable that only a few will receive any very important income. The General Land Office reports that eight States received grants under the terms of this act during the fiscal year 1921 and nine States during the year 1922. The total royalties paid during the fiscal year 1921 amounted to approximately \$10,373,000, and during the year 1922 to \$7,337,000. During the year 1921 the United States distributed \$1,806,805.96 among eight States, as follows: California, \$777,061.32; Idaho, \$37.50; Louisiana, \$199.58; Montana, \$43,168.12; New Mexico, \$78.75; North Dakota, \$16.97; Utah, \$300; and Wyoming, \$985,943.80. It is evident that the grants paid to the eight States were of negligible importance except in the case of California, Montana, and Wyoming. California has enacted that the entire proceeds received by the State shall constitute a current fund to be known as the State junior college fund for the maintenance of junior colleges, provided that any excess not required for this purpose shall be devoted to elementary schools. Wyoming has provided that 50 per cent of her quota shall be devoted to teachers' salaries, 10 per cent to the University of Wyoming for the construction, equipment, and furnishing of new buildings and for repairs, 38 per cent to the State highway commission for road construction, and 2 per cent to each county in proportion to the oil and gas production of the same. According to a statement in the Wyoming Educational Bulletin of June, 1922, the Government royalty fund amounted on April 30, 1922, to \$1,148,000. It was estimated that the distribution would amount to approximately \$250 per elementary and rural school teacher and \$375 per high-school teacher.

The interest of this act lies not only in the large grants received under it by California and Wyoming but also in its possibilities, for, should nonmetallic mineral deposits of great value be discovered in any of the public domain, they would thus become an important source of revenue to the State in which they were situated.

The passage on February 23, 1917, of the Smith-Hughes Act marked the entrance of the Federal Government upon an entirely

new educational policy. By the passage of the Morrill Act the Federal Government had begun as long as 1862 subsidizing industrial and agricultural work, but with the Smith-Hughes Act, "the Federal stimulus passed from the colleges to the public schools." This act provides subventions for the salaries of teachers, supervisors, and directors of agriculture, home economics, trade and industrial subjects, and for providing professional training for teachers of these subjects. Two hundred thousand dollars per year is devoted to the support of the Federal Board of Vocational Education created to carry out the provisions of this act. The general provisions of the act are too widely known to require any statement here. The Smith-Hughes Act provided for an annual Federal grant increasing from a total of \$1,860,000 in 1917-18 to \$7,367,000 in 1925-26, which amount thereafter becomes a continuing annual appropriation. The total amount provided under the Smith-Hughes Act in 1921 was approximately \$3,800,000 and in 1922 \$4,300,000. The results of this act upon vocational education are, in part, suggested by the following facts: In 1916 only two States in the Union—Wisconsin and Pennsylvania—had compulsory part-time or continuation school laws; in 1922 at least 21 States had such compulsory part-time education laws. The enrollment in Federally aided vocational schools increased from 164,186 in 1917 to 323,028 in 1921. The number enrolled in Federally subsidized teacher-training courses increased from 6,589 in 1918 to 13,358 in 1921.

In 1921 the United States provided under the Smith-Lever Act, \$5,080,000 to be distributed as subventions among the States for the support of extension work in agriculture and home economics. The amount thus provided in 1922 was \$5,580,000. As already noted, a portion of these moneys are available for work among children of public school age.

In addition to the funds thus far described, the United States makes annual appropriations to provide (1) approximately one-half of the costs of public schools in the District of Columbia, (2) to maintain schools for natives in Alaska, and (3) to pay the costs of the education of Indians in Oklahoma attending public schools and of the education of Indians in Federal schools. The sum provided by the Federal Government for the District of Columbia amounts to about \$2,000,000 per year and the appropriations for schools for natives in Alaska to approximately \$200,000 per year. In 1922 the United States paid to the public schools of Oklahoma \$197,982 for the tuition of Indian children attending public schools and \$372,000 for the education of Indian children in Federal schools.

A review of the preceding paragraphs dealing with Federal aid will show that during the biennium 1920-22 the United States

embarked upon no new policy of importance. The Smith-Towner and Towner-Sterling bills both represent a growing national educational consciousness, but, as already noted, both of these bills failed to pass. The Federal royalty mineral grant, thus far at least, affects too few States to be considered of far-reaching importance.

STATE POLICIES IN PUBLIC SCHOOL FINANCE.

In marked contrast to the situation just described with respect to the Federal Government is that which we find developing among the States during the biennium 1920-1922. During this period one State after another increased its school year and the age of compulsory school attendance, provided for the establishment of continuation classes for minors engaged in industry, established Americanization classes, entered upon campaigns against illiteracy, and sought to promote on a large scale other projects. Increased aid for high schools, for the promotion of consolidation, for the provision of free textbooks, for vocational education, and for health education and physical recreation are among the projects which have engaged, to a marked degree, the attention of the States. No less important than the tendencies just listed is that of establishing a legal scale of minimum wages for teachers, or of raising previously established minima. It will be seen that these projects and these policies all played an important part in the marked increase in school expenditures which took place in 1922 and which has already been noted.

Even more important than the individual undertakings and policies just noted is the question of the general trend. Taking the United States as a whole, in 1890, 23.75 per cent of the total receipts for public schools were derived from State sources; in 1905, 19.06 per cent; in 1920, 17 per cent. We see, then, that for the past three decades there has been a continual decrease in the per cent of total school costs furnished by the State. At present data are not available which will make it possible to determine whether, during the biennium with which the present account is concerned, 1920-1922, taking the United States as a whole, there was any marked change in this general trend of the diminishing relative importance of the State as a provider of school revenue. This, however, may be said, that although in some States the per cent of total revenues furnished by the State has declined during the past two years, in others there has been a definitely adopted policy to increase State aid, which has resulted in placing a much larger share of the burden of school costs upon the State than formerly.

It may be well to note at the outset one or two matters of importance. The first problem of public-school support is to furnish

adequate school revenues. Certain authorities at the present time are maintaining that the State ought to bear from 60 to 75 per cent of the total school costs. Such a condition may exist and yet the situation be very far from satisfactory. A number of Southern States have for many years drawn 50 per cent, or more than 50 per cent, of their school revenues from State sources, but this situation has been due to the fact that local school units have provided very meager funds, and consequently the total amount of revenue furnished was so small as to make impossible the maintenance of good schools.

A second matter of importance to be considered at this point is that the real test of what the State is doing is to be found not only in the amount of money it provides from State sources but also in the per cent of total school revenues which it furnishes. Thus, Minnesota in 1916 provided from State sources approximately \$5,035,000; in 1918, \$5,041,000; in 1920, \$6,382,000; in 1922, \$8,849,000; yet the per cent of total school expenditures provided by the State in these four years declined steadily, being, in fact, 23 per cent in 1916, 19 per cent in 1918, 16.6 per cent in 1920, and 15.7 per cent in 1922. From this brief presentation of two fundamental principles, let us now turn our attention to a few individual States which have recently made definite efforts to increase greatly the State's contribution to public-school support.

Among the States which since the close of the World War provided for greatly increased school revenue to be furnished by the State are Arizona, California, Georgia, Iowa, Louisiana, Massachusetts, New York, North Carolina, Pennsylvania, South Carolina, Texas, Utah, Washington, and West Virginia.

An act passed by the Arizona Legislature of 1921 provides for an annual levy sufficient to provide not less than \$25 per pupil in average daily attendance in common schools and high schools of the State as shown by the records of attendance for the preceding year. This provision displaces a law which provided for a levy sufficient to raise annually \$750,000. This new law resulted in the State providing \$1,254,325 in the year 1921-22, an increase of more than 66 per cent over the amount provided in the older law.¹

California in 1920 adopted a constitutional amendment whereby the State grant per pupil in average daily attendance was increased from \$17.50 to \$80 per elementary pupil and from \$15 to \$30 per high-school pupil. In 1890 the public schools of California derived 52 per cent of their revenues from the State; in 1920, 21 per cent. The constitutional amendment enacted in 1920 was a definite attempt to check this tendency of the State to bear a continually decreasing

¹ Bu. of Educ., Bul., 1922, No. 43, p. 11.

portion of the burden of school costs. It is estimated that had this amendment been in effect in 1921, the elementary schools of California would have derived 36 per cent of their support from State funds, and secondary schools 10.7 per cent of their support from the State. The counties in California must raise \$30 per pupil in average daily attendance in elementary schools and \$60 per pupil in high schools. All of the school moneys furnished by the State and 60 per cent of the moneys raised by the county must be devoted to the payment of teachers' salaries. This means a State minimum salary of from \$1,300 to \$1,400 per year.

The new school code of Georgia enacted in 1919 provided that, beginning with January 1, 1922, 50 per cent of all revenues received by the State from all sources of income or taxation shall be used and expended for the support and maintenance of common schools. Louisiana, by constitutional amendment adopted in 1920, provided an additional State tax of \$1,000,000. In the same year New York increased her appropriations for teachers' salaries to the extent of \$20,000,000. Few States in the Union show a greater tendency to recognize that the State must relieve the local school units of a much larger portion of the school burden than heretofore. Of the total revenue provided for public schools by New York, the State furnished 9.3 per cent in 1905 and 9.5 per cent in 1918. But in 1920 the State furnished 12.1 per cent, and in 1921 furnished 21.9 per cent. North Carolina increased her State appropriations for public schools from approximately \$750,000 in 1919 to \$3,295,000 in 1920.

Pennsylvania in 1921 passed a minimum salary law. All school districts of the State are classified as first, second, third, or fourth class. The salary act provides salary schedules for each class of school district. The State is required to pay districts which comply with the laws the following per cent of salary costs: First-class districts, 25 per cent; second and third class districts, 35 per cent; fourth-class districts, 50 per cent.

Texas in 1919 provided for an annual appropriation of \$2,000,000 to aid rural districts. The Texas Legislature of 1923 appropriated \$3,000,000 from the general revenue to supplement the State school fund. This will increase the per capita apportionment based upon pupils between the ages of 7 and 18 from \$10 to \$13.

Utah in 1920 adopted a constitutional amendment which permits a State school tax sufficient to provide annually an amount which, added to other State funds, will provide a sum equal to \$25 per school child. In the same year the State of Washington increased its State distributive fund from \$10 to \$20 per child of school age. The result of this was to increase the portion of total school costs borne by the State from 18 per cent in 1920 to 25 per cent in 1922.

Probably the most marked departure from traditional policies is to be found in Massachusetts. Possibly no other State pursued so long and so completely the policy of placing almost the entire burden of school support upon the local communities. The conviction that the State should assume little or no responsibility either for the direction or for the support of schools prevented Massachusetts from establishing a State permanent school fund until 1834. In 1915 Alabama, Mississippi, Montana, Delaware, Texas, and Kentucky each derived less than 50 per cent of their common-school revenues from the proceeds of local taxation; Massachusetts in the same year derived 97.2 per cent of her total school revenue from local taxation. In this form of support she long surpassed all other States in the Union. Again, Massachusetts leads the Union in the antiquity of this practice. Whereas local taxation for school support was not allowed in some States until well-nigh into the nineteenth century, and in some others, notably Alabama, not until the twentieth century (1901), Massachusetts permitted it as early as 1647 and in 1827 made it compulsory.

In the year 1919 Massachusetts frankly recognized the necessity of reversing her century-long policy and of placing upon the State a much larger share of school costs than in the past. This recognition was given practical expression by the passage of a law providing for the setting aside of a portion of the proceeds of the State income tax (created in 1916) as an annual current fund to be known as the general school fund. As the result of this legislation, whereas in 1915 the State had furnished only 1.82 per cent of the total public-school revenues, in 1920 she furnished no less than 12.3 per cent, and in 1921, 11.3 per cent. The creation of the Massachusetts general school fund was a definite recognition of a number of principles of far-reaching significance: (1) That the State must assume a much larger share of responsibility for equalizing school burdens and educational opportunities than in the past; (2) that this would necessitate the State providing a much larger share of the total school revenue than formerly; (3) that former sources of revenue were inadequate and that new sources must be found; (4) that a graduated State tax on personal incomes is an important and valid source of public-school revenue.²

In creating her general school fund Massachusetts was careful not to provide a fixed amount. On the contrary, the law requires that there shall be annually set aside from the proceeds of the State income tax an amount sufficient to subsidize the projects set forth in the act. In the year 1918 the State contributed \$1,113,000 toward

² For a full account of the Massachusetts general school fund, see Swift, F. H. "Public School Finance in Massachusetts," "Studies in Public School Finance, The East," Vol. II, University of Minnesota, Research Publications.

the support of public schools. In 1921 the general school fund alone contributed \$4,165,000, and the total amount contributed by the State for public schools, including vocational schools, was \$6,035,000. The income of the general school fund is to be used exclusively for the payment of salaries of superintendents, assistant superintendents, principals, supervisors, and teachers. The entire sum is paid out to the cities and towns of Massachusetts in reimbursements ranging from \$350 to \$150 for each school officer for whom the town or city is entitled to reimbursement from this fund.

A NEW CONCEPTION OF STATE AID.

A study of the history of school finance in the United States will reveal the number of different conceptions as to the purposes of State aid. The first State to create a permanent common-school fund was Connecticut, which did so in 1795. There is reason to believe that from the first the expectation in the minds of the legislators of Connecticut in establishing this fund was that the revenue should pay in full the wages of common-school teachers and so relieve the towns and school societies almost entirely from local taxation. The results of the Connecticut policy by which the responsibility of supporting schools was removed almost entirely from the local communities and thrown back upon the State could not have been foreseen by those who inaugurated this policy. Nevertheless, the evils soon showed themselves, and the school fund of Connecticut became notorious as an example of a magnificent endowment creating educational disaster. Of all the ills that followed the establishment of the Connecticut school fund, the most disastrous was its effect upon local taxation. The Connecticut School Code of 1700, which had continued in force until 1798, compelled every town to levy a local tax. The gradual increase of the income of the school fund was accompanied by an increase in disinclination to levy taxes, with the result that from 1821 to 1854 a local school tax was virtually unknown in Connecticut.

The lesson which Connecticut had learned at such a cost was not lost upon the other Eastern States. New York passed an act in 1812, three years prior to the first distribution of the revenue of her permanent common-school fund, requiring that "in order to participate in the income of this fund the local community must raise by tax an amount equal to its share of the State fund. From this time on in a considerable number of the States the purpose of State aid was conceived to be twofold: First, to ease the burden of local communities; second, to stimulate local effort. In general, State aid was distributed among counties and districts on the basis of total population or school population. No attempt was made to recog-

nize differences in the ability of various communities to provide school revenues as represented by differences in valuation, or to recognize differences in effort as represented by differences in local school-tax rates. During the past few years, however, numerous reports and studies have pointed out the supreme importance of these factors, with the result that there has come into prominence a new conception of the fundamental purpose of State aid, namely, that of evening out the inequalities in school revenues and school opportunities existing among the various communities of the State and which in the last analysis are due to factors which the local communities frequently are unable to modify. As the result of this new conception, we find one State after another attempting to establish a State equalization fund or providing for the distribution of already existing funds upon a basis which will take into consideration differences in valuation and in tax rates—that is, differences in ability, need, and effort.

A few examples of this tendency must suffice. As long ago as 1913 Colorado provided for setting aside out of the income of her public-school fund a sum not to exceed \$60,000, to be paid to districts unable to derive from all other State, county, and district revenues a sum sufficient to pay each teacher employed in the district at least \$50 per month for six months. In 1919 the amount to be set aside from the income of the public-school fund was increased to \$150,000. In 1921 an act was passed which provides that the State superintendent of public instruction before apportioning any of the income of the public-school fund shall first apportion to any county in the State in which the maximum rate of county-school tax (5 mills) shall be insufficient to provide funds to pay every public-school teacher within that county a minimum salary of \$75 a month, a sum sufficient to supply the amount of such deficiency. It will be seen that this act makes the entire income of the public-school fund available as an equalization fund, should the occasion arise.

It was in 1921 that the State of Maine passed a law providing that \$100,000 should be deducted annually from the State school fund to be used as a State equalization fund. The equalization fund is apportioned first for the sake of aiding towns whose aggregate attendance is small and which consequently will receive a small amount of help from that portion of the State school fund distributed on the basis of aggregate attendance. Whenever any school maintained by a town for the number of weeks of school provided for in said town fails to record at least 1,500 days' aggregate attendance, there shall be apportioned to the said town from the State equalization fund such sum as will give to said town an amount equal to that apportioned for 1,500 days' aggregate attendance. The State superintendent-

ent of public instruction is allowed to grant to any town a sum not exceeding \$500 in any one year for the encouragement of consolidation, conveyance of pupils, housing of teachers, standardization of schools, or other projects especially worthy of encouragement. The State equalization fund may be used to provide special aid for a school which has been closed because of an epidemic, a fire, or other unpreventable causes and which on account of such reasons would not receive the amount of State aid from the State school fund to which it would otherwise have been entitled. The balance of the school equalization fund not apportioned as provided for by the preceding provisions shall be apportioned to towns wherein the rate of taxation is considerably in excess of the State average rate yet fails to produce a school revenue sufficient to secure a reasonable standard of educational efficiency.

In 1921 the State of Michigan passed an act providing for State grants designed to equalize school burdens. This act grants \$200 of State aid annually to any "primary school district" maintaining a one-room school nine months if its school maintenance tax for a seven months' school is 12 mills or more. A special appropriation is made to provide for the funds to carry out the provisions of this act.

In 1921 the Legislature of Minnesota passed an act which provided for an equalization fund referred to in the act as supplemental aid. This act provided that to any school district whose school maintenance tax lies between 20 and 32 mills the State shall pay as supplemental aid one-third of the excess above 20 mills. If the tax levy for maintenance exceeds 32 mills, then in addition to the above amount the State shall pay one-half of such excess above 32 mills. In school districts maintaining only ungraded elementary schools, if a 20-mill tax does not raise the equivalent of \$600 for each teacher employed at least seven months, then the State board of education may grant to such school district an amount which, together with the proceeds of a 20-mill tax, will provide \$600 for each teacher employed. The Minnesota Legislature of 1923 passed an act providing that supplemental aid shall be limited to school districts whose local maintenance levy exceeds 20 mills. When a local school tax of 20 mills fails to yield the equivalent of \$40 per pupil in attendance 40 days, the State pays the difference between the sum per pupil produced by the 20-mill tax and \$40 per pupil. The effect of this act is to establish the fund for supplemental aid as an equalization fund.

In 1920 Mississippi enacted two exceedingly important laws—a compulsory attendance law and a law providing for an increase in State appropriations. The State superintendent of public instruction states that the new compulsory attendance law resulted in bring-

ing into school 33,186 white children over 7 years of age who had never been to school before and that—

The common-school appropriation (through legislation of 1920) was increased 60 per cent and all the increase put into an equalization fund to be disbursed by the State board of education in such a manner as to equalize as nearly as possible school terms and teachers' salaries throughout the State.

REFORMS IN APPORTIONING STATE SCHOOL FUNDS.

Scarcely less important than the provision of adequate revenue is the apportionment of such revenue in accordance with methods which may be characterized as scientific, sound, equitable, and democratic. Regarding no problem in school finance is the public at large more in need of information. In no phase of school finance has progress been more slow and the practices most commonly employed more unscientific and less necessary.

A recent study showed that in no less than 37 of the 48 States school funds were distributed all or in part on the basis of school population, despite the fact that the unsoundness of this basis and the disastrous results produced thereby have been pointed out again and again. One of the most important purposes of State aid is to even out inequalities which arise among school units as the result of differences in wealth; that is, differences in ability to provide money for schools. A bad method of distributing State aid, instead of evening out such inequalities, creates, exaggerates, and perpetuates them. Many States in the Union by adopting a scientific method of distributing State aid could bring about immeasurable improvement in educational conditions without increasing State aid a single dollar. One of the most hopeful signs of the present era is a growing attempt on the part of the States to reform existing methods of apportioning State funds. It is evident that the creation of a State equalization fund is in itself an effort in this direction. In addition to the establishment of such funds a number of States have undertaken the adoption of new methods and new bases of apportioning the income of their permanent public school endowment funds, the proceeds of a State tax, or some other general State fund.

In 1921 Maine passed a new law providing for a State school fund and for a new method of apportioning the same. Reference has already been made to the provision setting aside \$100,000 of this annual fund as an equalization fund. The major portion of the State school fund is distributed on a threefold basis: (1) To every town is granted \$100 for each full-time teaching position in elementary schools and secondary schools; (2) \$3 for each person included in the town's school census (5 to 21 years of age); (3) the amount available to the towns on the basis of aggregate attendance

in elementary and secondary schools. It will be seen that this law recognizes that the chief factor in public school support is the individual teacher, and the State assumes the responsibility of guaranteeing a definite amount for each teaching position in the State. Aggregate 'days' attendance is likewise a basis which has many things in its favor. Nothing can be said, however, in defense of distributing any part of State aid on the school census basis. The method by which Maine provided in 1921 for distributing the major portion of the State school fund, however much of an improvement over methods previously employed, fails utterly to take into consideration the comparative ability and the comparative effort of the local school units to furnish funds.

In 1921 New Hampshire increased State appropriations for aid to public schools from \$255,000 to \$325,000. State aid from this fund is distributed upon the basis of the ratio of elementary-school expenses to equalized valuation rather than to the inventory valuation as had heretofore been done. The superintendent of public instruction writes:

This change was an equitable and highly salutary one. The equalized valuation represents the actual wealth of the district so far as this can be reached by taxation.

California makes the teacher the chief basis for distributing the major portion of State aid. By a law passed in 1921 the State provides \$30 for every elementary and every high-school pupil in average daily attendance. California maintains two distinct funds—the State school fund for elementary schools and the State high-school fund for secondary schools. By a law passed in 1921 the State elementary-school fund is apportioned as follows: \$700 is paid for every elementary teacher, and the remainder of the fund is apportioned on the basis of average daily attendance. This money must be matched by the county, with the result that there is guaranteed for each full-time elementary teaching position \$1,400 a year. In 1921 California not only doubled the amount of State aid to be provided by the State per pupil but adopted an entirely new method of apportioning her State high-school fund. The method provided by the law of 1921 recognizes three bases: (1) Flat quotas; (2) quotas for attendance in evening high schools, in special day and evening classes, and in part-time schools; (3) average attendance. A certain flat sum goes to every day high school, whether a four-year, a junior, or a senior high school, on the basis of the number of years of work it offers. In addition to this flat appropriation, each high school receives grants for units of average daily attendance, the amount per unit decreasing as the number of units increases.

New York and Massachusetts are two States which through recent legislation have undertaken to give definite recognition to differences in local valuations. By a law passed in 1920 New York provided that in addition to its regular district quota each district employing more than one teacher shall receive \$250 for each full-time teacher. Districts having one teacher only with a property valuation of \$100,000 shall receive a quota of \$200. Districts having only one teacher and with a property valuation of less than \$100,000 shall receive a quota of \$200 and \$2 for each entire \$1,000 that the assessed valuation is less than \$100,000.

It is to be regretted that space does not permit a detailed consideration of the methods employed by Massachusetts in distributing various State funds. It is probable that no other State in the Union has been so ready to experiment with new methods and new bases of apportioning school moneys. Prior to 1904 Massachusetts had changed her method of apportioning school moneys no less than 13 times. The law passed in 1919, creating the general school fund, also provided for a new method of distributing the income of the permanent school fund. As a result of this readiness to experiment, Massachusetts has evolved methods of apportioning State school funds which, whatever their defects may be, are from the standpoint of the scientific soundness of the principles they seek to recognize immeasurably superior to those of most of the States. Massachusetts is one of the few States which takes into consideration, in distributing State aid, the assessed valuation and the rate of taxation of the receiving unit. It must not be inferred that Massachusetts recognizes these two exceedingly important factors in distributing all State funds, for she does not. Nevertheless, she gives far greater recognition to them than the writer has found in any other of the 14 States he has thus far studied.

Massachusetts limits the income of her permanent school fund, the Massachusetts school fund, to towns whose valuation is less than \$2,500,000. The quota granted to any town is determined by two factors: (1) The town's total valuation; (2) the excess of its expenditure for certain public school costs over its quota from the general school fund, measured or equated in terms of tax rate. In distributing this fund towns are divided into three classes on the basis of valuation limits as follows: Towns having a valuation of (1) less than \$500,000; (2) from \$500,000 to \$1,000,000; (3) from \$1,000,000 to \$2,500,000. The aid is distributed in a manner designed to give the larger quotas to the towns of lower valuations and to the towns expending most in proportion to their ability.

The general school fund derived from the proceeds of the State income tax is distributed among all the towns and cities of the State in the form of reimbursements for teachers' salaries. The quotas

of the fund are paid out in two installments, from the first of which are paid what for convenience may be called the ordinary reimbursements; from the second installment are paid what may be called supplementary reimbursements. Ordinary reimbursements are paid in the form of definite quotas for each teacher or other school officer employed. In the distribution of ordinary reimbursements no recognition is given to the valuation or to the local tax rate of the receiving unit. The amount is determined solely upon the basis of whether the school officer was employed for full time or part time, his professional training, years of experience, and salary received from the town or city. On the other hand, supplementary reimbursements are paid on the basis of the community's assessed valuation per pupil. A study of the legislation passed by Massachusetts 1919-1922 will show that this State is committed to the following principles: (1) State aid should be given in the form of reimbursements for money previously expended; (2) the amount of State aid granted shall be determined by (a) the community's ability to help itself as indicated by its assessed valuation, (b) the community's effort as indicated by its local tax rate, (c) the quality of educational opportunity the community seeks to furnish as indicated by the number and preparation of teachers and the character of the educational facilities provided.

NEED OF NEW SOURCES OF REVENUE.

There are a number of reasons which have forced the States to seek to discover new sources of school revenue. First and foremost is the increasing cost of public education and the inadequacy of existing sources to meet these costs; second, a growing recognition of the unsoundness of the general property tax which long has been and still remains the most important source of both State and local revenues. To these two reasons must be added a third, namely, that with the increase in school costs and revenues provided, permanent State endowments for common schools which at one time afforded important relief to the local communities have steadily declined in relative importance until to-day in the majority of the States these funds are of well-nigh negligible importance, viewed from the standpoint of the proportion of total revenue which they provide.

DECLINING IMPORTANCE OF STATE ENDOWMENTS.

In 1890 the public schools of the United States derived 5.45 per cent of all school receipts from the income of permanent school funds and lands; in 1905, 4.37 per cent; and in 1920, 2.7 per cent. From this we see that the proportion of total school receipts derived from permanent funds in 1920 was only half of what it was

in 1890. The significance of this fact can not be fully appreciated unless we recall that, except for the admission of a number of new Western States with vast endowments for public schools, the per cent of total school receipts derived from permanent funds would have declined even more rapidly than it did.

The five States which derived the highest per cent of their total revenue from permanent funds in the year 1905 are Wyoming, Nevada, Texas, Utah, and Oregon. Perhaps there is no better means of coming to an appreciation of the decline in the importance of permanent school funds as sources of revenue than by comparing the per cent of total revenue derived from permanent funds in these States during the years 1905 and 1920.

TABLE 3.—Five States ranking highest in per cent of total revenue derived from permanent funds in 1905.

States.	Approximate per cent of total school revenue derived from income of permanent school funds and endowments.	
	1905	1920
Wyoming.....	49.30	23.8
Nevada (1906).....	49.19	11.3
Texas.....	27.69	13.6
Utah (1904).....	21.20	4.6
Oregon.....	13.53	4.2

From the above table we see that, whereas Wyoming and Nevada each derived nearly half of their total receipts for public schools from their respective permanent common school funds in 1905, Wyoming derived less than one-fourth from this source in 1920, and Nevada slightly more than one-tenth. In Texas, permanent funds contributed more than one-fourth of the total school revenue in 1905, but less than half this proportion in 1920. In Utah permanent funds were five times as important as a source of revenue in 1904 as in 1920, and in Oregon approximately three times as important in 1905 as in 1920.

From this account of the declining importance of what was at one time in many a State not only the most important but the sole source of State school revenue, let us turn our attention to some of the newer types of State sources.

NEW SOURCES OF STATE SCHOOL REVENUE.

Of the new sources established by States to provide school revenues perhaps the most significant are the following: Corporation taxes, income taxes, inheritance taxes, occupation taxes, and severance taxes.

Corporation taxes.—New Hampshire, Maine, Kentucky, New Jersey, Virginia, and California are among the States which to-day depend for a portion of State school moneys upon the proceeds of State corporation taxes. California has applied this policy more widely than any other State, and may therefore be taken as an example of this important trend in school finance.

As the outcome of a tax-reform movement beginning at least as far back as 1894, California adopted in 1910 an amendment providing for the levying of a State corporation tax. This tax is levied on all corporations, the rate varying according to the type of corporation. In 1920 the State provided approximately 14 per cent of the entire moneys devoted to public schools. The major portion of this aid consisted of appropriations paid from the State general fund. Approximately 60 per cent of the general fund was derived from corporation taxes.

Severance taxes.—An epoch-making event in the history of school finance was the enactment by the State of Louisiana on July 1, 1920, of a law providing for a severance tax which places a tax on all natural products severed from the soil except agricultural products. A number of States, such as Utah and Minnesota, have long levied taxes upon ores, but a severance tax takes not only ores but timber, sand, gravel, clay, gas, oil, and all other nonagricultural natural products. The proceeds of this tax in Louisiana are devoted in part to the State university and the agricultural and mechanical college, and in part to State institutions for the deaf, blind, and other special classes. None of the proceeds goes to public schools; nevertheless, as a type of taxation it is of great significance and will perhaps prove very suggestive to many other States looking for new sources of school revenue. It is estimated that the Louisiana State University will receive annually from the severance tax between a million and a half and two million dollars. It is interesting to note in this connection that, in accordance with the recommendations contained in a survey of public education in Arkansas made by the United States Bureau of Education, the Arkansas Legislature of 1923 enacted laws providing for a State income tax and a State severance tax.

Income taxes.—An earlier portion of the present account has described at length the action of Massachusetts in 1919 by which she created a general school fund by setting apart a portion of the proceeds of the State income tax. We have also noted the inauguration of this policy by the Arkansas Legislature of 1923. Delaware is another State which in comparatively recent times has had recourse to a State income tax as an important means of providing State revenue for schools.

Inheritance taxes.—A study made in 1920 revealed the fact that at least five States—California, Delaware, Kentucky, Louisiana, and Virginia—were then devoting to schools moneys derived from taxes on inheritances. In 1923 Montana was added to this group through the passage of a law which provided that 50 per cent of the proceeds of inheritance taxes should be devoted to schools.

Occupation taxes.—In 1921 a law was passed by the State of Minnesota designed to do away with the practice of taxing iron ore on a tonnage basis and to substitute therefor a 6 per cent occupation tax on net profits. The constitutionality of this law was upheld by the United States Supreme Court and thus the right of the State to impose an occupation tax was established. At the present writing it is claimed that the mining companies of the State owe the State of Minnesota no less than \$5,000,000 in back taxes. Fifty per cent of the proceeds of the Minnesota occupation tax will be added to the general revenue fund, 40 per cent to the permanent school fund, and 10 per cent to the permanent university fund. The tonnage-tax law provides a 10 per cent penalty if payment is not made by June 1 of the following year.

Miscellaneous.—Certain States have provided that the proceeds of a tax upon special commodities or products shall be devoted to schools. Thus in 1921 Montana enacted a law providing that one-third of the proceeds of taxes on gasoline should be apportioned to public schools.

We have now discussed the most important developments and tendencies in State school finance during the biennium 1920-1922. It is to be regretted that space does not permit recounting a number of others. One at least should be mentioned, namely, the tendency to enact State laws prohibiting local communities from establishing sinking funds for the purpose of paying the interest and principal of bond issues. Such laws require that in the future bonds shall be issued in series and a tax levied sufficient to meet payments of interest and principal. Massachusetts and New Jersey are among the States which have recently enacted legislation of this character. The Massachusetts law provides that no further sinking funds for the payment of debts shall be established by any district, town, or city, except Boston, but that such debts shall be paid by such annual installments as shall extinguish the same at maturity. The law further requires the levying of an annual tax sufficient to meet all principal and interest bond obligations.

TENDENCIES IN LOCAL SUPPORT—COUNTY AND DISTRICT.

In 1890, of the total receipts for public schools in the United States, 68 per cent was derived from local sources. In 1920 slightly

more than 83 per cent.¹ Although there has been an increase in the proportion of the total school revenue furnished by local sources in nearly every State in the Union, with a few striking exceptions, such as Massachusetts already noted, the most striking increase has been in the South Central and South Atlantic States, where in 1890 of the total receipts 50 per cent or less than 50 per cent was provided by local units. In 1890 the per cent of total public school receipts derived from local sources was, in North Carolina 2; South Carolina 13, Tennessee 13, Texas 12. In 1920 North Carolina derived 70 per cent of her total public-school revenue from local sources; South Carolina 84 per cent; Tennessee, 82 per cent; and Texas, 46 per cent. A study of the situation in Alabama, Arkansas, Georgia, Kentucky, Louisiana, and Mississippi shows increases varying from 15 to 30 per cent.

Whether we view the United States as a whole or individual States, we discover that, despite a certain degree of progress in matters of centralization, and despite the utterances of educational theorists and court decisions to the effect that public schools are State, not local, institutions, in actual practice schools in the United States have tended throughout the last quarter of a century to become more and more locally supported.

The results of this tendency are being felt to-day as never before. From almost every State come reports of inadequate funds for the support of public schools and accounts of frantic attempts to cut, in the name of economy, teachers' wages and to reduce school curricula to the narrow, arid state of generations gone. The majority of the States are to-day financing their schools under the district system. The story of this system wherever found is the same: Inequalities in ability to produce school revenue, inequalities in effort and zeal, inequalities in educational opportunities.

It is a realization of the unfairness of existing systems of local support and local control and the disastrous and incurable evils produced by such systems that has led many scientific students of education and several of the States to give serious consideration to the possibilities of deriving a much larger proportion of school revenues from units more capable than school districts of equalizing school revenues, burdens, and opportunities. Those looking for a solution have turned their attention to the Nation, the State, and to larger local units, such as the county.

Some of the States, of which Maryland is a notable example, have depended upon the county as a unit of organization and school support from the very beginning of their statehood. Nevertheless,

¹ 83.2 per cent, consisting of 11.4 per cent from county sources and 71.8 per cent from district and other local sources.

a widespread recognition of the significance of the county as a source of school revenue is of comparatively recent development. The truth of this statement is suggested by the fact that the analyses of the public-school revenues prepared by the United States Bureau of Education for the years prior to 1918 did not report county school receipts separately, but simply included them under the general caption, "Local receipts."

Another fact pointing to the rising importance of the county in the support of public schools is found in the fact that, whereas in 1918 only 7.9 per cent of the total school receipts were provided from county sources, in 1920 the proportion contributed by the county had increased to 11.4 per cent. During this biennial period the increase in certain States was exceedingly marked. Of 17 States deriving 15 per cent or more than 15 per cent of their school revenues from county funds in 1920, in only two, Arizona and New Mexico, was the proportion less than in 1918. In all others the proportion remained the same or was greatly increased. The most notable increases were in Kentucky, Oregon, Ohio, North Carolina, Nevada, Louisiana, and Mississippi. Among these States the smallest increase was in Kentucky, where in 1918 the county contributed 17 per cent of the total school revenue and 25 per cent in 1920. The greatest increase was in Ohio, where in 1918 the county contributed only 1.7 per cent and 54 per cent in 1920.

Evidences are not lacking that the tendency already observed during the biennium 1918-1920 for the county to become an increasingly important source of school revenue continued throughout the biennium 1920-1922. A constitutional amendment adopted by Georgia in 1920 permitted each county to levy, on the recommendation of the State board of education, a county school tax of not less than 1 nor more than 5 mills. As the result of this law, half of the counties in the State were required in 1921 for the first time in their history to levy a local school tax. The total expenditure for public schools in Georgia increased from \$11,900,000 in 1920 to \$14,500,000 in 1921.

Not only in the South and Middle West, but in the West as well, has the county grown in importance during the last biennium. In California under the law of 1919 every county was required to levy an elementary county school tax sufficient to provide a sum equivalent to \$21 per pupil in average daily attendance. In 1921 an act was passed increasing the tax to a rate sufficient to provide at least \$30 per pupil, or \$700 per teacher employed, in case the sum estimated on this basis exceeds the sum required to furnish \$21 per pupil. Under the law of 1919 a limit of 5 mills was placed upon county taxation; the law of 1921 fails to state any limit and, by this failure, removes all limits. The county is required further to levy a tax sufficient to provide \$60 per high-school pupil in average daily at-

tendance and to provide for reimbursements to all high-school districts within the county for money expended for transportation of pupils living in territory in the county not included in any high-school district and further reimbursements to all high-school districts for textbooks furnished free to pupils residing in portions of the county not included in a high-school district.

By an act passed May 27, 1921, California provided for the organization of junior college districts and for the maintenance of junior colleges therein. In each county wherein there is not a county junior college a special tax upon all taxable property within the county must be levied. This tax must be sufficient to defray the cost of educating for the current year students attending a junior college in an adjoining county.

The most important recent tendencies in district school support are the increasing of the limits of local taxation and bonding limits and the requiring of the preparation of budgets to be approved by higher educational authorities.

Preceding paragraphs have noted the declining importance of the State as a source of school revenue. It is scarcely necessary to note that this declining importance of State sources has been paralleled by an increase in the importance of local sources. Thus, whereas in 1890 approximately 68 per cent of the total receipts for public schools in the United States was furnished by local sources, in 1920 nearly 72 per cent was thus provided, excluding county revenues. No one conversant with the facts would question the statement that the tremendous increase in school revenues in the United States during the past 25 years has been due chiefly to the increase in the efforts put forth by the local school units. Practice varies widely with respect to the authority and responsibility which the various States delegate to their local school units in the matter of raising school revenues. Massachusetts and California, two States which without question belong in the highest rank educationally, have no limits as to rates of local school tax. Arkansas, on the contrary, fixes the maximum district tax at 12 mills, with the result that rates in this State vary all the way from 0 to 12 mills. The impossibility of maintaining schools from the proceeds of taxes levied under existing rates has led a number of States during the biennium to endeavor to have these limits raised or removed entirely. The same tendency is visible with respect to limits of indebtedness.

THE PRESENT SITUATION.

Despite the vast increase in school funds which the present account has recorded, despite also the progress which has been made in

establishing new sources and in apportioning State aid in a more just, scientific, and efficient manner than formerly; the educational situation with which the United States is confronted at the close of the year 1922 leaves much to be desired. It makes little difference to what section of the country we turn our attention, in nearly every quarter the story is one of inadequate teachers' salaries, inadequate buildings, inadequate revenues, glaring and ominous inequalities in educational opportunities. We are informed that never in the history of New York City has the proportion of children attending school on part time been so large. Again, we learn "that the high-school situation in Boston has never been as bad as at present." In 1920 the annual cost per pupil in average daily attendance for the United States as a whole⁴ was approximately \$64, yet in 1922 the annual cost per pupil in average daily attendance in Tennessee rural elementary schools⁵ varied all the way from \$39 to \$7. In 1921 in Arkansas⁶ the highest average county expenditure per pupil enrolled was \$31, the median expenditure was \$10 per year, and the lowest, \$6.

There never was a time in the history of American education when there was a greater need for sane and scientific leadership. Throughout the breadth and length of the United States to-day city, State, and National organizations and commissions are working with a zeal and devotion unsurpassed. On the one hand we hear the cry that public education has exceeded all legitimate bounds and that the public schools must retrench. This cry is met on every hand by the carefully worked out and intelligent findings of scientific students who are at one in declaring that school facilities must not be lessened but immeasurably increased. These students point out that increases in school costs have been accompanied all along the line by vast increases in national income and that the situation we are now confronting is not one which should arouse fear but rather one which should urge us to a scientific study of the sources and distribution of school revenues.

Dr. Edwin R. Seligman, of Columbia University, outstanding national authority in political economy, declares that—

While it is true that the educational budget has increased more rapidly than the population, it is not true that it has increased more rapidly than the wealth of the community. On the contrary, it may be affirmed with little fear of contradiction that, from the economist's point of view, the growth of prosperity in the United States as a whole has been so enormous as to make the proportion of educational expenditures to real wealth of the community actually smaller than it was in past decades.

⁴ Bu. of Educ., Bul., 1922, No. 20, p. 44, Table 27. This amount is the sum of columns 12 and 13.

⁵ Tenn. Supt. of Pub. Instruction Rep., 1921-22, pp. 48-49; Hamilton County, \$39.47; Hancock County, \$7.

⁶ Swift, F. H., The Public School System of Arkansas, Part II, Public School Finance, p. 13, Table 10; county expenditures, Pulaski, \$30.54; Hempstead, \$10.21; Stone, \$6.24.

It is the writer's belief, based upon a first-hand study of nearly one-third of the States, that there is not a State in the Union which, if it were to adopt a sound and scientific system of financing education, would not be able to place adequate educational facilities within the reach of every school child and to maintain a complete free system of public education from the kindergarten to the State university. It is necessary to acknowledge with regret that such a condition is not to be found. Not only do the schools in a number of the States depend for a considerable portion of their revenues upon pupils' tuition fees and gifts of patrons, but throughout the breadth and length of our land there are many school districts which levy no tax whatsoever and maintain no schools.

This situation is found not only in the poorer States but in the prosperous Middle West. It is unnecessary here to dwell at length upon the policies through which reforms must be inaugurated and educational opportunities and the burden of school support equalized, for these have been set forth in a number of bulletins recently published by the Bureau of Education as well as in private publications.⁷ It may be well to note, however, that the greatest obstacles at the present time to a sound system of school finance are the district system, unscientific methods of apportioning State aid, and the employment of the general property tax as the chief source of school revenue.

Despite the features of the present situation just described, there are abundant reasons for confidence in the future. There never was a time when the citizens of the United States were so alive to the importance of public-school finance and to the necessity of inaugurating reforms. Moreover, there never was a time when economists and educational experts were making available for the benefit of the public such a large amount of scientific information bearing upon the problems of public-school finance. The results of this public attitude and of the work of students of school finance are clearly discernible in the legislation of the last biennium. Arizona, California, Delaware, Georgia, North Carolina, Texas, Virginia, and Washington are a few of a growing number of States which in some cases have completely revised their systems of school support; others have made important and far-reaching modifications. The financial crisis of which we hear on every hand is not without its compensations, for the pressure brought about by this crisis has forced the public to recognize the importance of the economic factors entering into the

⁷ The interested reader is referred to State Policies in Public School Finance, Bu. of Educ., Bul., 1922, No. 2; The Public School System of Arkansas, Part II, Public School Finance, Bu. of Educ., Bul., 1923, No. 11; Public Education in Oklahoma, Bu. of Educ., 1922, Ch. III, Problems of Financing Public Schools; Studies in Public School Finance, 4 vol. University of Minnesota, Research Publications.

maintenance of a system of public education. It is a matter of congratulation that the most difficult problem in the history of the race, that of educating a citizenry drawn from the four quarters of the earth, falls upon the richest of all nations. In this task, as noble as it is difficult, the United States of America need not and will not fail.

CHAPTER II.

SOME IMPORTANT SCHOOL LEGISLATION, 1921 AND 1922.

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CONTENTS.—Introduction—Compulsory school attendance—State departments of education—County boards of education—County superintendents and rural supervision—State taxation—Local school taxes—Secondary education—School buildings—Teachers' homes—Teachers' certificates—Teachers' salaries—Teachers' tenure—Teacher training—Textbooks—The school term—Consolidated schools—Physical welfare of school children—Moral education—Americanization—Kindergartens—Vocational rehabilitation—Private and parochial schools—Higher institutions.

Within the biennial period here under review, 47 States held regular meetings of their legislative assemblies, and a few extraordinary sessions were called by governors. The lawmakers of six States—Massachusetts, Rhode Island, New York, New Jersey, South Carolina, and Georgia—meet annually, and those of all others except Alabama meet biennially. Of the latter group, Maryland, Virginia, Kentucky, Mississippi, and Louisiana hold sessions in even years and all the rest in odd years. Alabama holds quadrennial sessions and will hold its next in 1923.

Owing to the necessity for brevity in this chapter and to the enormous bulk of school legislation passed in the two-year period under review, the method of treatment here must be more or less summary; only what appear to be the most important phases of legislation, or phases of most interest to school men, can be noticed. In the States whose legislative assemblies met in 1921 and 1922, there were passed approximately 1,600 educational acts of general application within the respective States where passed. Manifestly this number is much too large to admit of adequate discussion of each act in any treatment limited to a few printed pages. It has therefore seemed well to make the review here undertaken a brief subject study and, by means of a sort of adaptation of the "case system," to use certain outstanding acts as examples of noteworthy legal provisions on the subjects treated.

It must not be understood, however, that a legislative act reviewed or cited in this chapter is in every case thought to be the very best of its kind. Several considerations have entered into the choice of

the enactments here used. Among the more important of these considerations are, first, that on the whole the act is appraised as reasonably good legislation; second, that it possesses relative merits with respect both to other enactments of the same State and to legislation passed on other subjects in other States; third, that in the light of other present-day enactments it generally represents an advanced stage of legislation on the subject with which it deals.

COMPULSORY SCHOOL ATTENDANCE.

Laws requiring attendance at school have two fundamental purposes: First, to insure the best possible citizenship, and second, to enforce the educational rights of children. The first of these looks to the interest of the State, and the second to the interest of the child. The latter would seem to be the newer conception, for it is only in recent years that we have developed considerable appreciation of the child's inherent right to go to school. Formerly church and religious interests entered largely into the purpose of such compulsory education as existed, but this idea is now overshadowed by the interests of the State and the child. These are fundamental, and so compulsory education is now regarded as fundamental.

The Ohio act of 1921 is selected for treatment under this head. It regulates both school attendance and the employment of minors. Compulsory school age is defined in this act to mean 6 to 18 years of age, but a local school board may, for its own district, define such age to mean 7 to 18. The parent or other person in charge of a child of compulsory age who is not employed on an age and schooling certificate must send the child to a public, private, or parochial school for the full term, which can not legally be less than 32 weeks in the year. Exemption is allowed in the case of a child whose bodily or mental condition, "upon satisfactory showing," does not permit school attendance, and also of one receiving at home instruction by a teacher whose qualifications are approved by the local superintendent of schools. Where attendance is at a school other than public, the instruction therein must be equivalent to public-school instruction "for children of like age and advancement," and the hours and term of attendance must be equivalent to those of the public schools.

Although the employment of minors in vacation time is regulated by law in many other States, Ohio is now in advance in making provision for vacation "activities" other than ordinary labor. The act authorizes boards of education to "provide or approve, subject to the approval of parents, activities for children during the summer vacation period which will promote their health, their civic and vocational intelligence, their industry, recreation, character, or thrift, or several of these," and the local superintendent is directed to keep

proper record of these activities, for which school credits may be allowed.

A child may be assigned to any suitable school, but when suitable schooling is not available in the district he can not be sent elsewhere unless tuition is paid and transportation furnished for distances over 2 miles in case of elementary pupils and over 4 miles in case of high-school pupils. School boards must provide high-school facilities within 4 miles of those qualified to attend or must furnish transportation. Completion of the work of a four-year high school exempts a child from further attendance requirement. In case of failure or refusal of the superintendent of schools to excuse a pupil from attendance or to issue an employment certificate on request, appeal may be taken to the juvenile court of the county, and the decision of this court is final.

The Ohio act contains no specific provision for a State supervisor of attendance or like official for general State supervision of attendance-law enforcement, and no penalty is provided for a district as such which fails to enforce the attendance law, as in Pennsylvania, where State funds may be withheld from delinquent districts; but rigorous personal penalties are prescribed for violations of the act, and the provisions for local attendance officers would seem to be reasonably adequate. The board of education of every city and of every village district not a part of the county school district must employ one attendance officer, and one or more assistants may be employed. Likewise every county board of education is required to employ at least one such officer and may employ assistants. The powers and duties of attendance officers are prescribed at length, and include the power to enter and investigate places where minors are employed, to take into custody and put in school a child not in attendance, to make to the juvenile court complaint against truants and their parents, and otherwise reasonably to enforce the law.

The child labor law, which is embodied in the same legislative act with school-attendance requirements, is drafted in correlation with these requirements. This law is too long and intricate to admit of complete analysis here, but in general Ohio now prohibits the employment of minors under 16 years of age within school hours, and the employment of those between the ages of 16 and 18 is permitted only under sanction of the school authorities as evidenced by various classes of employment certificates. A brief description of these certificates will serve as an outline of the main provisions of the law. They are all issued by the local superintendent of schools and are of the following classes:

1. An "age and schooling certificate," issued only on pledge or promise of the prospective employer that he will employ the child and on proof that the child is over 16 years of age, has completed the

work of the seventh grade in school, and is physically fit to perform the labor in which it is proposed to employ him. This certificate is printed on white paper.

2. A certificate marked "Retarded—schooling not standard," which may be issued to a child who, in the opinion of the proper school authority, is so below the normal in mental development that he can not "with further schooling and due industry" pass the test showing completion of the work of the seventh grade. A child of this class must be over 16 and must comply with the provisions of the act relating to physical fitness. This certificate is printed on yellow paper.

3. A certificate marked "Conditional—schooling not standard," which may be issued to a child over 16 who can not for the time being pass the seventh-grade test, but who "with further schooling and due industry" can pass it. This certificate is issued only on a showing of certain facts such as that the child has not had proper educational opportunity or that his services are needed for the support of dependent relatives, and on condition that he will, in addition to part-time day-school attendance, pursue approved studies in evening school or elsewhere. Physical fitness is required here as in other cases. The color of this certificate is green.

4. A "vacation certificate," issued to minors between 14 and 18 years of age for employment during the vacation period in occupations lawful for such minors. Requirements as to age, physical fitness, and promise of prospective employer apply here, but the certificate is issued without regard to the amount of schooling completed. This certificate is printed on blue or blue-tinted paper.

5. A "special age and schooling certificate," issued to minors over 14 years of age and permitting employment in lawful occupations during hours when school is not in session, other than the summer vacation, or permitting part-time employment where the minor is engaged in alternate work and study in cooperative courses approved by the State board of vocational education. This certificate is issued without regard to completion of the seventh grade, but physical fitness for the occupation is required. The color of the paper used is light brown.

6. A "limited certificate." Any one of the first four classes of certificates above mentioned may be "limited" and all "special" certificates must be. A limited certificate is issued to a minor whose physician's certificate shows him physically fit only for certain occupations, and the employment certificate, whatever may be its class, must conform to the physician's statement of occupations for which the minor is physically fit. The certificate here described is in reality not of a separate class, but represents a limitation of any one of the other classes.

7. An "overage certificate" may be issued to a minor proved to be over 18 years of age but who may reasonably be supposed to be under that age.

8. An "age and preemployment card" may be issued to a boy over 16 who was lawfully employed before the passage of this act, and such a boy is excused from further attendance except at part-time school.

Ohio's continuation-school provisions are also included in the same legislative act with the attendance law. Local boards of education are authorized to establish and maintain part-time schools or classes, and where these are maintained minors holding employment certificates must attend so long as they are required to have certificates. It is provided, however, that the local superintendent may excuse any minor from attendance on satisfactory showing that the latter has already completed the work given in the part-time school, and four-year high-school graduates are exempt from all attendance requirements. The amount of attendance required is not less than four nor more than eight hours a week for the full term of the school. Where established, part-time classes must be held between 7 a. m. and 6 p. m. only on days other than holidays and Sundays, but on Saturdays they must be held between 7 a. m. and 12 m. Classes may be provided by employers, private and parochial school authorities, or philanthropic agencies, and when approved by the State superintendent of public instruction attendance thereat is accepted in lieu of public continuation-school work. Attendance at part-time classes is not required of holders of "vacation" or "special" certificates, and generally all minors are exempt after passing the age of 18.

Some other noteworthy features of the Ohio attendance law are that principals or teachers in both public and private schools shall report to the district clerk attendance in their respective schools and classes, that proceedings in juvenile court be instituted against parents and children violating the law, that provision be made by local school boards for indigent children, and that an annual enumeration be made of all children between 5 and 18 years of age.

The Ohio law represents the most advanced stage of compulsory attendance legislation in this country. It contemplates school attendance and prohibits child labor within the school term or school hours for all children under 16 years of age; it fixes, for the normal or average child, educational qualifications equivalent to completion of the seventh grade before regular employment can be entered between the ages 16 and 18, and between these ages attendance upon part-time classes is required without regard to completion of the seventh grade; it raises the hand of compulsion altogether only when the age of 18 is reached or the work of a four-year high school

completed. A dozen years ago, in connection with the movement for "industrial education," much was said of the "gap" in the child's life between the ages of 14 and 16, within which period the attendance law did not apply and the child was yet too young to be accepted as an apprentice. Under such laws as that of Ohio there is now no such gap; the child is in school.

STATE DEPARTMENTS OF EDUCATION.

All States, except Illinois, Iowa, Maine, Nebraska, Ohio, and South Dakota, now have general State boards vested with a greater or less degree of administrative control over their systems of public education; and of the six States named, each has a board for one or more special purposes, such as the administration of vocational training. Every State has a chief State school officer who is called in most cases "superintendent of public instruction," but the title "commissioner of education" is used in several cases and shows some tendency to displace other titles for this office. The trend in present-day legislation is toward more definitely centralizing administrative authority and fixing responsibility in the State board of education, or like body; and the State superintendent tends to become, as many authorities urge that he should be, a professional expert functioning as chief executive officer of the board.

A California act of 1921 (ch. 605) exemplifies this tendency. It creates a "department of the government of the State of California to be known as the department of education," and directs that this department be conducted under the control of an "executive officer to be known as director of education." The State superintendent of public instruction is, ex officio, the director. The act, however, makes no attempt otherwise to change the title of the State superintendent or to provide for his appointment by the governor or the State board of education. Article IX, section 2, of the California constitution directs that a superintendent of public instruction be elected by the qualified voters at each gubernatorial election, and any attempt in a statute to change the manner of choosing this officer would doubtless be unconstitutional.

The work of the department is divided into two divisions, namely, (1) a division of textbooks, certification, and trust funds, in charge of the State board of education, which is continued with powers and functions as under the older law and with certain additional functions in respect to teachers' colleges and special schools; (2) a division of normal and special schools, in charge of the director of education, but under the general oversight of the State board. California publishes the textbooks used in its public schools, and this system of textbook supply is left under the control of the State board

of education, as is also the system of certifying teachers. Trust funds mentioned in the act include the teachers' retirement fund. The State board of education also retains the administration of funds accruing for vocational education and for the rehabilitation of persons disabled in industry.

For the conduct of State teachers' colleges and certain other State institutions the State superintendent as director of education is given somewhat more direct administrative control. It is provided that the division of normal and special schools shall perform the functions conferred by older law on the boards of trustees of the several State teachers' colleges, the California Polytechnic School, and the State School for the Deaf and the Blind, which boards are abolished by this act, and that this division be in charge of the director of education "for the purposes of administration." The presidents or principals of these institutions are, under the act, appointed by the director, with the approval of the State board, and other instructors and employees are similarly appointed, but on nomination of the respective presidents or principals. The State board is invested with the powers formerly vested in the trustees of teachers' colleges in so far as they relate to the enactment of rules and regulations and the revocation of diplomas. The department of education succeeds to "all the duties, powers, purposes, responsibilities, and jurisdiction" of the State board of education and the respective boards of the teachers' colleges, the polytechnic institute, and the school for the deaf and the blind.

The California act presents several phases of interest. First, it creates in the State government a "department of education" with legal existence as such and on equal footing with other State departments, such as "labor and industrial relations," "agriculture," and "public works," which were also created by acts of the legislature of 1921. Secondly, it makes the superintendent of public instruction the chief "executive officer of the department of education. Thirdly, it abolishes the boards of trustees of certain State educational institutions, including the schools for training teachers, and vests their powers and functions in a State department. Fourthly, it displays a more definite fixing of responsibility.

COUNTY BOARDS OF EDUCATION.

Five States in 1921 or 1922 included county-school organization among the subjects on which their legislatures took action. Ohio and Kentucky reorganized their county boards and otherwise revised their existing "county unit" laws, and Arizona included in its legislation a bill providing for county administration in counties where accepted by vote of the people, but the enacting clause was omitted from this bill as signed by the governor. The Oregon Legis-

lature also passed a "local option" county-unit act. Missouri is the fifth State in this group; its legislature passed an initial law on the subject.

The Missouri act places the rural schools of the State under county-unit organization. It creates in each county a county board of education of six members elected by the people; two of these are to be elected annually for terms of three years. The powers of this board are to appoint a county superintendent of schools and, on his nomination, to appoint assistants, supervisors, and attendance officers; to contract with teachers after their selection from eligible lists by local district boards; to exercise administrative control over school property within the county school district; to change the boundary lines of local districts and to combine such districts for either elementary or high-school purposes; to maintain high schools or otherwise provide for high-school instruction and pay transportation charges; to prepare and publish an annual budget; to have control of the annual tax levy of 40 cents on the \$100 in the county district, which levy may be increased by the voters; to borrow money and issue bonds; on recommendation of the superintendent, to make rules for the district schools; to furnish needed supplies and school libraries; to select textbooks; to discharge existing indebtedness of local districts. All existing school districts which maintain high schools of the first class are exempted from the provisions of this act and are thus made independent districts. It is provided in the act that after July 1, 1922, the title to all school property in the county district shall vest in the county board of education, except that public-school lands granted by the National Government and funds derived therefrom remain the property of the district or township as under the older law. Provision is made for the transfer of an independent district, on its request, to the county district, and for the transfer of a local to an independent district. Local districts and district boards retain all privileges and powers vested in them under older laws, except such as are specifically conferred by this act on county boards and county districts.

In Missouri the district system has taken deep root, having been planted there long ago, and many people of the State will pass very reluctantly from the district to the county unit of local control. This tenacity of the district system has, in fact, been evidenced in the case of the act here outlined, for soon after its passage a referendum petition was circulated, the necessary number of signatures was obtained, and the act is accordingly referred to the people voting at the election in November, 1922.¹

¹ This act was rejected by the people, Nov. 7, 1922.

Independent school districts in Missouri are left independent on the fiscal as well as on the administrative side. Otherwise expressed, the county as a whole is not a "unit" for school purposes, either administrative or fiscal; for the independent district, within its own corporate limits, collects and retains its own taxes, and the county district does likewise. Thus the equalizing value of the county unit, which is urged by advocates of this unit as one of its chief values, is not so marked in Missouri as in some other States. Missouri, in exempting districts maintaining high schools of the first class, probably exempts all of its cities and many of its towns from the requirement that they contribute to the support of all the schools within the county.

COUNTY SUPERINTENDENTS AND RURAL SUPERVISION.

This is a subject on which there is much legislation; so much, in fact, that adequate treatment is impossible in brief space. Chapter 382 of the Maryland Laws of 1922 is selected for review here.¹ It (1) amends the State's law governing the certification of teachers, principals, and supervisors; (2) provides salary increases for all teachers except those holding third-grade and provisional second-grade certificates, the larger increases being allowed the better trained; (3) raises the salaries of county superintendents, these being based on qualifications, number of teachers in the county, and experience as superintendent; (4) provides for additional supervisory assistants to the superintendent; (5) increases by 50 per cent the State aid to high schools; (6) raises from 140 to 160 days the required term for colored schools; and (7) establishes an "equalization fund" to aid 15 of the less wealthy counties which are not able with a tax of 6.7 mills to meet the State's requirements.

From an administrative point of view the most noteworthy of these provisions are those relating to the county superintendent and his corps of supervisory assistants. It is here that Maryland has taken decidedly advanced ground. In this State a county superintendent must hold a "certificate in administration and supervision," which is granted only to a person who is a graduate of a standard college or university or has equivalent "scholastic preparation," has completed one year of graduate work in education at a recognized university, or has equivalent advanced credits, and has had at least two years' experience as a teacher. The act provides, however, that the incumbents may continue to hold the office and may be reappointed by county boards of education.

¹ For a discussion of this act by State Supt. Albert S. Cook, see *School and Society*, June 17, 1922, p. 678.

The following is the schedule of salaries provided in the act for these officers:

County superintendents' salaries.

Number of teachers in the county.	Years of service, salaries.		
	1 to 4 years.	5 to 7 years.	8 or more years.
Fewer than 150.....	\$2,500-2,940		
150 to 199.....	2,940	\$3,240	\$3,540
200 or more.....	3,540	3,840	4,140

Two-thirds of the salary of each superintendent is under this act paid out of the general State school fund, but the State will not share in the payment of any salary in excess of \$2,940 unless the superintendent has met the full requirements for the certificate in administration and supervision, nor will the State share in the payment of any amount which the county board of education may allow in excess of the schedule.

From this salary schedule and the qualifications required, it seems clear that Maryland aims to put at the head of its system of school supervision in each county a professionally trained and expert superintendent. The plan of employment of assistants in the system would seem equally meritorious. The act provides that in each county employing fewer than 80 teachers in the white elementary schools one "supervising teacher or helping teacher" shall be employed; in a county with 80 or more but fewer than 120 teachers, two such supervisory assistants must be employed; for 120 but not more than 160 teachers, three such assistants; more than 160 teachers, one such assistant for each additional 50 teachers or major fraction of 50. Both supervising and helping teachers must be holders of "certificates in supervision," which are granted to persons who are graduates of standard colleges or universities or have equivalent preparation and who have had at least four years of teaching experience in elementary schools. For a "helping teacher," however, a certificate of this class may be granted on academic and professional work one year less in grade.

The salary of a supervising teacher must be not less than \$2,040; if he or she has served in such position in the State four years, \$2,340 is the minimum; if in such position seven years or more, not less than \$2,640 must be paid. With the approval of the State superintendent, county boards of education may employ helping teachers at an annual salary \$600 less than that paid supervising teachers, but under all other conditions prescribed for the latter. The act directs that the State pay two-thirds of the salaries of all supervisory assistants. County boards of education may employ super-

vising teachers or helping teachers in addition to those provided for in the act, but the State will not share in the payment of these additional employees.

STATE TAXATION FOR SCHOOL PURPOSES.

The States usually make their contributions to the support of the schools either through appropriations from general State funds or by means of tax rates specifically for the schools; and these rates in turn fall into two general classes—those expressed in mills on the dollar or cents on the hundred dollars and those expressed in an amount per child of school age or per pupil in attendance. Four States—California, Washington, Utah, and Arizona—have in recent years increased their State contribution to the schools by fixing amounts which the States as such will pay per child or per pupil. An act of the Arizona Legislature of 1921 will illustrate.

The Arizona act provides for the annual levy of "a sufficient tax to raise a sum which shall not be less than \$25 per capita on all children in average daily attendance in the common and high schools of the State, as shown by the records of the State superintendent of public instruction for the preceding year." This provision displaces a section of the revised statutes which provided for a levy sufficient to raise the sum of \$750,000 annually. Since the average attendance in the public schools of the State was 43,420 in 1920, and a considerable increase of attendance was then shown, it seems safe to assume that the State distributive school fund is by this time approximately \$1,250,000—an increase of 66 per cent over the amount provided in the older law. An advantage of this kind of tax rate is that it is based on the needs of the schools and grows in amount as the schools grow, whereas a tax expressed in mills is based on assessed valuation, which bears little relation to school needs and may grow or diminish without regard to increased or diminished school attendance.

LOCAL SCHOOL TAXES.

A State in which there has been considerable effort in recent years to establish a sound system of school support is Texas. Already a relatively generous contributor to the schools within its borders, that State as such appreciably increased both its taxes (3½ mills now being allowed) and its appropriations, until in 1920 these, added to an income of \$4,384,009 from permanent school funds and lands, brought its contribution to school support up to 54 per cent of the total public-school income within the State. The increase of local taxation was somewhat more laggard, owing to the failure of some early efforts in this direction. In 1915 a constitutional amendment

was proposed which was intended to authorize any county to levy a county school tax not exceeding 50 cents on the hundred dollars and any district to levy not exceeding \$1 on the hundred. This amendment, however, was defeated by a small majority at the November election, 1916, and the county was thus left without any authority to tax itself for school purposes, while the common-school district could levy only the 50 cents permitted under the older constitutional provision, though the independent city district could levy as much as \$1 on the hundred. This condition with respect to local taxation remained the same until 1919, when the advocates of an increase proposed another change. This time the provision for a county tax was omitted from the amendment, and the single proposition to authorize the common-school district to levy as high a rate as the independent district was submitted to the people. This amendment was ratified at the November election, 1920, and became a part of the State constitution.

By act of March 5, 1921, the legislature "put into effect amended section 3 of article 7 of the constitution, relating to independent and common-school districts," and the latter districts, as well as the former, may now levy as much as 10 mills on the dollar for the support of their schools. The county remains without power to tax itself for school purposes, but the advocates of a county-school tax doubtless find a measure of compensation in the fact that a relatively large contribution is made to the schools from the State treasury.

EXTENSION OF SECONDARY EDUCATION.

There is a wide diversity in plans of providing high-school education in this country. The more important of these plans may be indicated by naming the several units used or especially organized for high-school purposes. These are (1) city and town school districts, which maintain their own schools of secondary grade, as in practically all States; (2) townships, as in Pennsylvania and Indiana; (3) high-school districts organized without necessarily following township or common-school district boundary lines, as in Illinois and Wyoming; (4) "union high-school districts" whose boundaries follow the boundary lines of constituent common-school districts, as in California and Colorado; (5) counties where only one county high school is maintained by each county, as in Alabama and some parts of Kansas; (6) counties where several county high schools may be maintained by each county, as in North Carolina and Tennessee; and (7) consolidated elementary-school districts which may superimpose one or more high-school grades, as in Minnesota and Mississippi.

An Indiana act of 1921 requires the establishment and maintenance of township high schools under certain specified conditions. Any township having an assessed valuation of \$600,000 or more, and having resident therein eight or more graduates of the elementary schools in each of the two preceding years, must establish a school of secondary grade, unless such a school is maintained within 3 miles of the limits of the township. In any township having an assessed valuation of \$1,250,000 or more, a high school or joint high and elementary school must be established on petition of one-third of the resident persons in charge of children of school age, notwithstanding there may be a high school within 3 miles of the boundary lines of the township and without regard to the number of graduates of the elementary schools. Indiana had in 1920 a population which averaged 81.3 per square mile of the State as a whole. Since the township in that State is approximately 36 square miles in area, it should lend itself admirably to the purpose of providing high schools for rural communities. The general use of the township for this purpose, however, should have no claim to superiority over that of the county where an adequate number of high schools in each county is provided for in the law and where these schools are properly placed.

STATE AID TO SECONDARY SCHOOLS.

Special State aid to schools of secondary grade is now almost universal in this country. Methods of distributing this aid vary in the different States, but those of most frequent occurrence exhibit one or more of the following bases for distribution: (1) Number of high schools maintained, distinction generally being made between different classes or grades of such schools; (2) number of teachers employed to give secondary instruction; (3) amount of tuition fees paid by districts not maintaining high schools of their own; and (4) number of high-school pupils in attendance. The attendance basis appears in several acts of recent legislatures. A Rhode Island act of 1921 is noteworthy. It provides that any town maintaining a high school approved by the State board of education shall be entitled to receive, for the first 25 pupils in average attendance, \$35 for each such pupil, and for the second 25 in attendance, \$25 per pupil. The town so aided must admit pupils from other towns "to the extent of the capacity of its high school," at a rate of tuition not to exceed the average cost per capita for maintenance. A town not maintaining instruction of secondary grade must provide for the free attendance of its children at some high school or academy approved by the State board and shall be entitled to State aid for each pupil "upon the same basis and to the same extent as if it maintained a high school by itself."

SCHOOL BUILDINGS.

Two phases of recent legislation relating to the school plant are worthy of note here: First, the provisions made for more and better buildings generally, and, second, better regulation of schoolhouse construction by means of the requirement that plans and specifications have the approval of the State department of education. Even before our entry into the World War there was lack of adequate school-building accommodations in the country, and with the almost total stoppage of construction during the war there was by the year 1920 a widely felt want. This condition was aggravated by two serious difficulties in the way of resumption of construction, namely, the high cost of materials and labor and the failure of many bond issues to attract buyers. A very common way of meeting these difficulties was simply to submit to the payment of the high costs and to make bond issues more attractive as investments by means of legislation authorizing higher interest rates and the like.

North Carolina, however, chose a different plan of financing its needed buildings. By act of March 7, 1921, its legislature provided for a State bond issue of not over \$5,000,000 for the purpose of establishing in the State treasury a "special building fund" to be loaned to county boards of education for the erection of schoolhouses. It was provided in the act that no loan be made for a building of less than five rooms and that plans for buildings have the approval of the State superintendent of public instruction. Thus the necessity of throwing local school bonds on the market and possibly having them go without buyers was obviated. In this connection it may be pointed out that Texas and a few other States use moneys of their permanent school funds to buy local bonds. This plan undoubtedly operates to stabilize the issue and sale of these bonds and in the same transaction provides safe investment for the permanent school fund.

A noteworthy act relating to the approval of schoolhouse plans was that of the Maine Legislature, approved by the governor March 17, 1921. This is an amendment of an older law, and the law as amended provides that plans for a new school building or for reconstruction costing \$500 or more must have the approval of the State superintendent of schools. When the building is ready for occupancy the committee in charge of construction must report to the State superintendent such facts as will show whether the plans previously approved have been carried out. He may in his discretion have the building inspected and, where changes are required, order them to be made. On failure of the committee to make the required changes, State school funds may be withheld from the town erecting the building. Many of the States now provide by law for

the approval of schoolhouse plans by State departments, particularly of those for rural schools, and the Maine law is representative of the better class of these legal provisions.

TEACHERS' HOMES.

Only a few years back the teachers' cottage, or home, found little place in school laws, but more recently this is a subject of legislation in some State or States each year. More than one-third of the States now have laws specifically permitting school boards or other local agencies to expend public funds for the provision and maintenance of homes for the teacher or teachers employed in the district, and in numerous other cases some general authorization in the law would seem to embody this permission. There were in the school year 1921-22 more than 3,000 residences or other suitable buildings owned or rented by school districts and occupied by public-school teachers.

One of the most recent enactments on this subject was that of New Jersey, approved by the governor March 11, 1922. This act empowers the board of education of a consolidated district "to purchase, erect, or lease, and to furnish a residence or residences for teachers employed in the district, and to operate and maintain such residence or residences, providing both board and lodging, or either, for such teachers and upon such terms of payment as may be fixed by such board of education, and to borrow money therefor with or without mortgage." This act, it will be observed, permits the school board either to operate the home entirely or to provide lodging only, leaving the teachers to furnish their own meals. The Legislature of New York also provided for teachers' homes at its session of 1922.

TEACHERS' CERTIFICATES.

There has been no very distinctive legislation on this subject within the past two years. The general tendency to raise the qualifications required of teachers, which has been marked for many years, is still evident, however. A constant subject of legislation in this field is the accrediting of diplomas and certificates. The Florida Legislature of 1921 passed two acts of this nature which are representative. One of these acts provides for the issuance of a "graduate State certificate" to a graduate of the normal or collegiate department of the State university or the State College for Women if he or she has, in the junior and senior years, made on examination a general average of 85 per cent or more and an average in no subject less than 60 per cent. A diploma from the collegiate department, however, entitles the holder to a certificate only when he has devoted at least three-twentieths of his college study to psychology and educa-

tion or has taught 24 months in the public schools. A graduate of any chartered college or university in the State may be similarly certificated if the institution to be thus accredited submits to inspection and the regulations of the State board of education and maintains standards equivalent to those of the university and the college for women.

The other Florida act provides for accrediting in that State a teacher's certificate issued in another State. This act provides that the certificate filed for acceptance must be equivalent to a Florida first-grade or a State certificate and must represent certain prescribed educational qualifications and otherwise meet the approval of the State superintendent of public instruction. This act of the Florida Legislature exemplifies legislation of which there has been a considerable body in recent years. The advantages of such a law are obvious.

TEACHERS' SALARIES.

A Pennsylvania act of 1921 presents several of the better phases of "minimum salary laws." The purpose in such a law should be not merely to prevent the stingy school board or district from hiring a teacher at less than a decent living wage; the law should do this and more. It should recognize differences in academic and professional preparation and promote the employment of the better qualified teachers; it should make equitable allowance for variation of the cost of living, as, for example, between urban and rural communities; it should promote longer tenure; and, finally, it should provide for State aid in paying the minimum salaries required to be paid. Some of the earlier salary laws succeeded only in making the district pay a certain minimum, which often operated as a maximum, and where salaries were stipulated according to grade of certificate held, the demand for the low-grade teacher was in some cases increased, while the teacher of higher quality was inclined correspondingly to leave the profession or to go elsewhere to teach.

All school districts of Pennsylvania are classified as first, second, third, or fourth class, Philadelphia and Pittsburgh being districts of the first class, and gradation downward to the fourth is made according to population. The act here considered provides salary schedules for each class of district. The schedules for elementary teachers and for elementary principals devoting less than one-half their time to supervision and administration are given below.

Salaries of elementary teachers.

Classes of districts.	Minimum.	Annual increment.	Number of increments.
District of first class.....	\$1,200	\$100	8
District of second class.....	1,000	100	8
District of third class.....	1,000	100	4
District of fourth class.....	100		

It will be observed that these schedules provide somewhat higher salaries for teachers in the larger centers of population, and that the initial or basic salary is increased by a minimum annual increment for a prescribed number of years of teaching service. Similar schedules are prescribed for high-school teachers, principals, supervisors, and other members of the teaching and supervising staffs. The prescribed salaries and increments are intended as minima, local school authorities being permitted to allow higher pay, and where existing schedules provide salaries equal to or in excess of those provided by this act, these schedules may remain in force. The annual increments are applicable only where the "beneficiary" remains in the service of the same school district; when a teacher enters the service of a district other than where previously employed, the point of starting in the schedule must be as agreed upon with the proper authorities of the district becoming the new employer. Thus the act tends to bring about longer tenure of the same teaching position or in the same employing district.

With respect to qualifications required of beneficiaries the act provides that only where the qualifications required for the certificate held include not less than graduation from a State normal school or equivalent training, or where the certificate is a permanent license to teach in the public schools, is the teacher entitled to the benefits of the salary schedule. Teachers not entitled to these benefits must be paid at least \$75 per month, or, in the case of the holder of a "professional certificate," \$85 per month. After September 1, 1927, all persons receiving public-school teachers' certificates, except emergency certificates, must have the qualifications required by this act of beneficiaries of the salary schedules. Thus one of the effects of the act will be to raise the standard of teachers' qualifications.

Of the minimum salaries prescribed for the teaching and supervisory staffs, except those of part-time and night-school teachers, the State is to pay districts which comply with the law as follows: Districts of the first class, 25 per cent; districts of the second and third classes, 35 per cent; fourth class, 50 per cent. Where a teacher is legally paid less than the salary prescribed in the act a corresponding per cent of the salary is to be paid by the State. By means of these provisions for State aid the State of Pennsylvania will become, as the funds provided for in the act are made available by taxation or appropriation, a more generous contributor to the support of schools within its limits, and thus equality of educational opportunity will be promoted.

TEACHERS' TENURE.

"Teachers' tenure laws," which are now among the statutes of several States, present some difficulty of proper enactment and ap-

plication. It is certainly not desirable to give the inefficient or immoral teacher such strength of tenure that he can not by reasonable means be separated from the service; and, on the other hand, it would seem no more than just to give the efficient teacher, after a proper period of probation, such tenure as will relieve him of having to stand annually for reelection. There is, somewhere between hard and fast tenure and annual election, a desired mean; and recently enacted laws would seem to be trying to reach this by placing on the school board, after the probationary period is past, the burden of showing cause why any teacher should be dismissed or reduced.

A Colorado act of 1921, which applies to the city school districts of Denver, Colorado Springs, and Pueblo, exemplifies present-day legislation on this subject. The first section of this act is brief and may be quoted in full:

SECTION 1. Any teacher who has heretofore been or shall hereafter be employed as a regularly elected teacher for three consecutive school years in any first-class school district having 20,000 or more inhabitants, and shall be re-elected after the passage of this act, shall, without further election, have stable and continuous tenure of his or her position during efficiency and good behavior.

Section 2 of the act relates to the method of dismissal of a delinquent teacher. It provides that no teacher after probation shall be dismissed or reduced in salary (except in case of reduction of 50 per cent or more of all teachers), unless charges are preferred in writing and the accused is given opportunity after at least 30 days' notice to be heard in person and by attorney if he wishes. It is provided, however, that whenever dismissal is recommended by the superintendent of schools and by the principal or supervisor having immediate supervision of the teacher, it may be effected without a hearing by vote of at least two-thirds of the entire membership of the school board. But in such a case a statement in writing of the cause of the board's action must be furnished the accused, and a copy preserved in the records of the district. Evidence given at hearings must be under oath or affirmation, which may be administered by the president of the board.

TEACHER-TRAINING INSTITUTIONS.

Two States in 1921 passed acts which are typical of the outstanding features of current enactments under this head. The Minnesota Legislature changed the names of "six educational institutions heretofore designated as State normal schools" to "State teachers' colleges," and the normal-school board was accordingly changed to State teachers' college board. The six institutions thus redesignated are located at Winona, Mankato, St. Cloud, Duluth, Moorhead, and

Bemidji. The board is authorized to award appropriate degrees to persons who complete the prescribed four-year course. Several other States have in very recent years designated as "teachers' colleges" all or one or more of their State institutions for training teachers.

By act of 1919, West Virginia provided for normal training courses in public high schools and granted State aid of \$400 to each school approved for the purpose by the State board of education. This aid was to be in addition to sums allowed for classified high-school instruction, and was granted to not exceeding 10 schools in the State. Chapter 15 of the acts of 1921 amends the older law by allowing aid to the amount of \$1,000 in lieu of the \$400 and increases to 20 the number of schools that may be so aided. It is provided in the act that no training school located in a county in which there is a State normal school or other State institution maintaining a normal course shall be aided by the State. There are now somewhat more than one-half of the States in which normal training is maintained in public schools of secondary grade. Kentucky by act of 1922 provided for this kind of training.

TEXTBOOKS.

Since the change, in 1917, in Arkansas from county textbook uniformity to State uniformity, there has been no radical change of any State's policy with respect to the uniform use of textbooks in its public schools. With respect to free textbooks, there has been some tendency toward the further spread of free-book provision. Exclusive of a few States providing free books for indigent pupils only, there are now 39 States whose laws provide for furnishing textbooks free to public-school pupils, at least for the elementary grades. These laws fall into three general classes, as follows: (1) Those which provide that books be furnished at State expense, (2) those requiring local school authorities to furnish free books, and (3) those which merely permit local authorities to take such action. Five States are of the first class, 13 of the second, and 20 of the third.

Within the period here under review one law of the mandatory type was enacted. This was in Montana. The law of this State requires all school districts to purchase books and furnish them free of charge to public-school pupils, including those in high schools. District trustees are required to submit to the county commissioners estimates of the cost of books needed in their respective districts, and the commissioners must levy taxes in the several districts of the county to provide funds for the purchase of books. Parents or guardians may, under the Montana law, buy books for their own children or wards.

THE SCHOOL TERM.

The marked tendency in this country to raise the required school term to nine months in all districts where such a term can be maintained without undue burden is seen in a Michigan act of 1921. This act prescribes a minimum term of nine months for all districts, excepting any that may have an assessed valuation less than \$75,000. In a district with less than \$75,000 but with \$30,000 or more the term must be at least eight months. If the valuation is less than \$30,000 and the children of school age are fewer than 30, only seven months are required. Any district which fails or refuses to maintain school according to requirement forfeits its share of the State distributive school fund. This act also grants State aid of \$200 annually to any "primary school district" maintaining a one-room school nine months, if its school-maintenance tax for a seven months' school is \$12 or more on \$1,000 of valuation; and a special appropriation is made to provide this aid.

THE CONSOLIDATED SCHOOL.

Here is a term that needs better definition. Six States define by statute the term "consolidated school" or "consolidated district," while many other definitions are obtainable from such official sources as educational reports; and few, if any of these, are identical. The term, however, is generally understood in its principal aspects. These include the organization of a central school in place of two or more one-room or other small schools, the extension of the district over a wider area in order to make available and bring together at one center a sufficiently large group of pupils to permit suitable gradation and instruction, and the provision of an adequate school plant and of means of transportation to and from school.

An Iowa act of 1921 repeals that State's older law on the subject and substitutes several new paragraphs. This act does not especially define a consolidated school but provides that, "consolidated-school corporations containing an area of not less than 16 Government sections of contiguous territory in one or more counties may be organized for the purpose of maintaining a central school." The procedure in effecting such an organization is by presenting to the county superintendent a petition of one-third of the voters of the proposed consolidated district; filing of objections, if any, with the superintendent and his decision thereon; subject to appeal to the county board of education; and a vote on the question by the qualified voters. A majority vote in the proposed district as a whole is necessary to decide the issue, but when it is proposed to include a district containing a town or village of 200

inhabitants or more or a school corporation comprising 16 sections of land and maintaining a central school, such a district or corporation may vote separately. It is provided in the act that the expenses incident to the organization of a consolidated district be paid out of the general funds of the county. Taxation is regulated by the existing school-tax laws, and a site and buildings may be provided either by taxes or by bond issue. Transportation must be provided for pupils, but the school board is not required to have the vehicle leave the public highway. Under the Iowa law annual State aid is granted to a consolidated school approved by the State superintendent of public instruction as follows: For a two-room building, \$200; three-room building, \$500; four rooms or more, \$750.

Though some authorities would doubtless urge that a larger proportion of State aid be allowed the consolidated school, the Iowa act of 1921 exemplifies some of the better tendencies in present-day legislation on this subject. One marked tendency is seen in the provision that the proposed district vote as a whole on the issue. The earlier laws of some of the States permitted a single original district to defeat by a mere majority a proposed consolidation, even though a large majority of the votes in the proposed consolidated district as a whole were favorable. Another present-day tendency is toward effecting any single consolidation in the light of the interests of neighboring communities. It is easily conceivable that, unless proper foresight is exercised, a few favored communities in a county may effect consolidations in such fashion as to leave other parts of the county practically impossible of improvement by means of enlarged central schools. Under the Iowa act the county board of education is made the final authority in fixing the boundaries of proposed consolidated districts, and this board may prevent unwise district boundary arrangements.

THE PHYSICAL WELFARE OF SCHOOL CHILDREN.

A Massachusetts act of 1921 is typical of the better class of laws providing for the physical examination of public-school pupils. It requires the school committee of any city or town to appoint one or more school physicians and nurses, to assign them to the public schools, and to provide them with all proper facilities for the performance of their duties. The act provides, however, that such appointment and assignment to duty shall be made by the board of health in any city where this board is already providing medical inspection as contemplated in the school law. A second exemption is made in the case of a town constituting part of a superintendency union which employs medical experts to the satisfaction of the State

department of education. The Massachusetts law contemplates physical examination both for the purpose of discovering and excluding communicable diseases and in order to detect other ailments and defects for possible treatment and cure.

A class of legislation to which lessons learned from the World War gave decided impetus was the provision for physical education in the schools. Many of these provisions are mandatory in character—that is, they require the school authorities to provide physical training—and others are merely permissive. Under a Connecticut act of 1921 “there shall be established and made a part of the course of instruction in the public schools of this State a course in health instruction and physical education.” The course must be adapted to the pupils of the several grades and “shall include exercises, calisthenics, formation drills, instruction in personal and community health, and safety, and in preventing and correcting bodily deficiency.” The act directs that this course be prepared by the secretary of the State board of education, who may employ experts to assist in the preparation, and when approved by the State board the course so prepared must be used in the schools. All public-school pupils except those in kindergartens are required to take the course, which in measure of time must aggregate at least $2\frac{1}{2}$ hours a week. Four-fifths of this time must be devoted to physical education and one-fifth to the teaching of health.

MORAL EDUCATION.

If one may judge from requests received in the Bureau of Education for information and advice relative to moral education in the public schools, there has been in recent years increased interest in this subject; and the enactment of several State laws designed to promote moral instruction has also shown this interest.

The most recent act relating to moral education was that of Mississippi, approved March 7, 1922. This act directs the State board of education to “prepare or cause to be prepared a suitable course of instruction in the principles of morality and good manners,” provides that this course be used in all the public schools, and makes it the duty of county and city superintendents to see that the provisions of the act are carried out. It is provided that the course may be graded and may be formulated with the idea that a certain amount of time will be devoted to it. A proviso is added to the effect that no “doctrinal nor sectarian teaching shall be permitted in any public school,” and that any pupil may be excused from the course on written request of his parent or guardian.

The Mississippi act presents several features in the introduction into the public-school curricula of what are often called “special

subjects." The first of these features is that it embodies little detail as to the nature of the course; it merely directs that a course be prepared, fixes one or two limitations, and then leaves the State board to work out the details administratively. This procedure is in accord with the approved practice in other States. A second noteworthy feature of the Mississippi act is that it prescribes no specific time to be devoted to the subject, and thus it avoids a danger seen in some other State laws relating to special subjects. This danger is that special-subject requirements with minimum time limits specified may be written into statutes to such extent that too much of the total weekly instruction period will be thus whittled away. It is better that legislators leave to the proper school authorities the matter of adjusting the desired new subject in the course of study. Another example of statutes omitting time limits is a 1921 act of California, which provides for instruction in the public schools in the causes and dangers of fires and means of fire prevention. This act directs school authorities to provide such a course and makes it the duty of each public-school teacher to devote "a reasonable time in each month" to instruction in the subject. In contrast with the principle of administration followed in the California and Mississippi acts, an act of another State requires that at least 30 minutes each week be devoted to instruction in kindness to animals.

AMERICANIZATION.

As early as 1919 the New York Legislature passed an act providing for the instruction of illiterates and non-English-speaking persons over 16 years of age. This act authorized the State commissioner of education to divide the State into zones and to appoint directors, teachers, and other necessary employees. It also authorized any city, county, or town to appropriate money for such instruction. By 1920 the movement for Americanization had gained momentum and two acts were passed on the subject in this State. One of these authorized the commissioner of education to provide courses for foreign-born and native persons over 16 and directed that these courses include English, history, civics, and other subjects promoting good citizenship; the other act directed the commissioner to provide in the normal schools courses for training teachers of Americanization subjects. An act of 1921, which comes within the period under review here, repeals the provisions of the act of 1919, authorizing the commissioner to divide the State into zones, and permits city boards of education and district trustees (as well as the State commissioner) to establish and maintain "courses of instruction or study and schools in connection with factories, places of employment, or in such other places as he or they may deem advisable" for the purpose of pro-

viding instruction for persons over 16 years of age. This act authorizes the apportionment of State funds to teachers in these courses as to the regular public-school teachers. State appropriations are made for Americanization.

An older act of the New York Legislature, passed in 1918, requires minors between 16 and 21 years of age who do not possess the ability to read, speak, and write the English language which is required for completion of the fifth grade of the public schools to attend a day or evening school. In this State the regular compulsory attendance law applies to children up to the age of 16, unless in lawful employment between the ages of 14 and 16, and employed children between these ages must attend continuation school. It is seen, therefore, that New York State has several laws designed to remove illiteracy or Americanize the foreign born, and these would seem to be of such character as to prove reasonably effective.

KINDERGARTENS.

A Wisconsin act of 1921 is selected for notice here. It provides that the school board of any school district, other than a union high-school district, shall establish and maintain a kindergarten in charge of a legally qualified teacher when petitioned so to do by the parents or guardians of 25 or more children between the ages of 4 and 6 years. In case the district maintains two or more school buildings, the petitioners must reside within 1 mile of the building in which it is proposed to establish the kindergarten. The act declares that when a kindergarten is established, it shall be a part of the common-school system of the district, and shall be supported by taxation as other schools are supported. Under existing Wisconsin law, the lower limit of the legal school age is 4 years; the kindergarten is therefore on equal footing with other public schools, subject, of course, to the legal provision relating to petitions. The type of law to which the new Wisconsin act belongs is widely known as the "mandatory-on-petition" type, and is urged by many as suitable for present-day conditions in the average State. Other mandatory-on-petition laws are found in Arizona, California, Kansas, North Dakota, and Texas.

VOCATIONAL REHABILITATION.

By act of June 2, 1920, Congress provided for the "promotion of vocational rehabilitation of persons disabled in industry or otherwise and their return to civil employment." This act followed the same lines in general as the Smith-Hughes act providing for the promotion of vocational education in that it provided for cooperation between the Federal Government and the States, required the States

in order to share its benefits to assent to its provisions and match the Federal money dollar for dollar, and outlined a plan of administration similar to that provided for vocational education.

At the close of the fiscal year ended June 30, 1922, 34 of the States had accepted the provisions of the Federal act. These States were Alabama, Arizona, California, Georgia, Idaho, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Tennessee, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.

An Illinois act of 1921 is a representative State enactment on the subject. It accepts the provisions of the Federal act and designates the State board of vocational education as the board for carrying out its provisions. The Illinois act prescribes the duties of the State board as follows: (a) To cooperate with the Federal board, (b) to prescribe necessary courses, (c) to formulate a plan of cooperation with the State industrial commission, (d) to make and submit required reports and plans, and (e) to report annually to the governor. The State board is authorized to appoint needed technical and clerical assistants and to accept gifts and donations. A biennial appropriation of \$125,000 is made, and the State treasurer is designated custodian of funds.

PRIVATE AND PAROCHIAL SCHOOLS.

The law of Nebraska, as amended by chapter 53 of the acts of 1921, embodies some noteworthy features relating to private and parochial schools. This act includes the compulsory attendance law of the State, and the regulation of schools other than public is related to compulsory attendance. The act contains three requirements which would seem to exemplify present-day tendency with respect to the regulation of private-school instruction. These requirements are, (1) that persons in charge of such schools submit to the public-school authorities reports of enrollment and attendance, (2) that teachers in these schools be holders of certificates as required of public-school teachers, and (3) that these schools be inspected by the proper public authorities. Under the act, reports must be made to the county superintendent of schools, or in case of a metropolitan city or city of the first class, to the city superintendent. With respect to certification, the act provides that the teacher in a private, denominational, or parochial school must hold a "certificate entitling such teacher to teach corresponding courses or classes in the public schools." Inspection is made by the county or city superintendent,

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as the case requires, and the State superintendent is directed to require these local officers to make inspection at least twice each year. In case the private-school authorities fail or refuse to conform to the provisions of this act, no teacher can be lawfully licensed to teach in the school, and the attendance of pupils therein will not be accepted in lieu of public-school attendance. These provisions would seem to afford all the regulation necessary to bring private-school instruction up to the standards set by the State, at the same time leaving to such a school a measure of freedom of action consistent with American free institutions. It may be recalled here that the Ohio compulsory attendance law does not go so much into detail as the Nebraska law in the regulation of the private school. On the other hand, Michigan and Alabama have made detailed requirements similar to those of Nebraska.

INSTITUTIONS OF HIGHER LEARNING.

That a State tax should be levied especially for the support of State educational institutions is urged by many students of college and university administration, and there would seem to be some tendency toward the passage of laws providing special taxes for this purpose. The State of Washington, by act of 1921, provided mill-tax rates for the support of several of its educational institutions, as follows: For the university, 1.1 mills; State college (agricultural), 0.67 mill; Bellingham Normal School, 0.2 mill; Cheney Normal School, 0.159 mill; Ellensburg Normal School, 0.12 mill. The rates fixed in this act represent increases over those provided for in an older law. It is made the duty of the "joint board of higher curricula" to recommend to the legislature of 1925 any changes in these rates which it may deem necessary. Fourteen States now provide for all or a part of the maintenance of their State educational institutions by means of a mill-tax levy.

Another Washington act of 1921 relates to admission to the State university. It provides that "the University of Washington shall begin its courses of study in liberal arts and sciences at the points where the same are completed in the public high schools of the State, as far as practicable." The act provides that no student with qualifications less than graduation from a four-year accredited high school shall be admitted to the university, except that persons over 21 years of age and those registering in extension work, short courses, and summer sessions may be admitted. Admission is upon examination or upon certificate from a public high school or other educational institution whose course of study is approved by the university authorities.

AGRICULTURAL COLLEGES.

Two Utah acts of 1921 represent efforts to correlate the work of State universities and agricultural colleges. One of these acts outlines courses to be provided at the agricultural college, and the other, courses at the university. The act relating to the former institution directs that its curricula comprise agriculture, horticulture, forestry, animal industry, veterinary science, domestic science and art, elementary commerce, elementary surveying, instruction in irrigation for agricultural purposes, military science, history, language, mathematics, physical and natural science, mechanic arts, and pedagogy with special reference to industry. The college is not permitted to offer courses in liberal arts or the professions of law, medicine, and engineering, except agricultural engineering. It may confer no degree in education or pedagogy.

The act relating to the university declares this institution to be the "highest branch of the system of public education," and directs that its courses be arranged as far as practicable to supplement the instruction in the subordinate branches, "with a view to afford a thorough education to students of both sexes in the arts, sciences, literature, and the civil professions, including engineering." The university, however, must not include in its courses agriculture, except elementary agriculture in the normal course, horticulture, animal industry, veterinary science, or instruction in irrigation for agricultural purposes. No degree in domestic science and art may be awarded by the university.

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CHAPTER III

HIGHER EDUCATION.

By GEORGE F. ZOOK,

Specialist in Higher Education, Bureau of Education.

CONTENTS.—College Entrance Examination Board—New England College Entrance Certificate Board—North Central Association of Colleges and Secondary Schools—Association of Colleges and Secondary Schools of the Southern States—Association of Colleges and Preparatory Schools of the Middle States and Maryland—American Bar Association—Association of American Law Schools—Association of American Colleges—American Council on Education—National Conference Committee on Standards of Colleges and Secondary Schools—American Association of University Professors—National Research Council—Carnegie Foundation for the Advancement of Teaching—Studies in college entrance requirements—Solutions for the growth in numbers of college and university students—The residence of university and college students—Salaries at State institutions of higher learning—The cost of higher education—The Purnell bill—Rehabilitation of United States World War veterans—The Reserve Officers' Training Corps—The junior college movement—Conference on Negro education—Institute of International Education—American University Union in Europe—International fellowships and scholarships—The Rhodes scholars—Foreign students in the United States.

THE COLLEGE ENTRANCE EXAMINATION BOARD.

The total number of candidates examined by the College Entrance Examination Board in June, 1921, was 18,223, as against 15,266 the previous June. The secretary's report states that 1,724 schools sent candidates to the board's examinations in 1921. Of these, 918 were public schools and 806 private schools, from which there were 6,669 and 10,946 candidates, respectively. In addition there were 608 candidates who were either conditioned college students, or prepared by private tutors, or self-prepared, or who neglected to give the information called for by the board's form of application for examination.

The secretary's report also shows that there was an increase over the previous year of 2,202 in the number of boys and of 755 in the number of girls who took the board's examination. It is interesting to note that in the number of boys from the private schools there was an increase of 1,761, and from the public schools an increase of 519; and that in the number of girls from the private schools there was an increase of 508 and from the public schools an increase of 199.

The new comprehensive examination plan is increasing in popularity. The number of candidates seeking admission by this plan increased from 2,519 in 1920 to 2,713 in 1921. Twenty-eight colleges and universities were designated by candidates for admission under the new plan. Young women particularly prefer to take the comprehensive examination, as seems clear from the number who took the new-plan examinations for admission to the following

higher institutions: Wellesley, 501; Smith, 490; Harvard, 469; Vassar, 324; Mount Holyoke, 257; Yale, 270; Princeton, 181; Radcliffe, 71; Barnard, 63; Wells, 19.

In the list of subjects which new-plan candidates elect for examination, English, mathematics, French, and Latin are the most popular. History, chemistry, physics, and Spanish follow in the order named.

THE NEW ENGLAND COLLEGE ENTRANCE CERTIFICATE BOARD.

The nineteenth annual report of the New England College Entrance Certificate Board states that the total number of schools which in 1920-21 had the certificate privilege from the board was 579, of which 98 had the specimen certificate privilege. Of these, 347 (about 60 per cent, the same per cent as last year) sent one or more pupils on certificate to the colleges represented on the board.

At the present time there are 33 schools on the trial list, and 453 on the fully approved list, making a total of 486. To these may be added 112 schools that have the right of sending specimen students on certificate, making a grand total of 598 schools that have the certificate privilege from the board for the year 1921.

The following institutions compose the membership of the New England College Entrance Certificate Board: Amherst College, Bates College, Boston University, Bowdoin College, Brown University, Colby College, Massachusetts Agricultural College, Middlebury College, Tufts College, Wesleyan University, and Williams College.

THE NORTH CENTRAL ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS.

In the proceedings of the North Central Association of Colleges and Secondary Schools for 1921 the secretary reports 133 accredited colleges and universities. Three of these institutions were added during 1920 and five in 1921, after having been inspected by representatives of the association. In addition to these institutions the association has accredited 43 institutions primarily for the training of teachers, and 20 junior colleges. The number of accredited secondary schools was 1,372.

THE ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS OF THE SOUTHERN STATES.

The Association of Colleges and Secondary Schools of the Southern States reported for 1921 a membership of 53 universities and colleges and 63 secondary schools. Besides these there were 21 individual members. The association has approved 50 colleges and universities and 557 secondary schools. In 1921 the association revised its standards by adopting a large part of the standards recommended by the committee on standards of the American Council on Education.

ASSOCIATION OF COLLEGES AND PREPARATORY SCHOOLS OF THE
- MIDDLE STATES AND MARYLAND.

At the meeting of the Association of Colleges and Preparatory Schools of the Middle States and Maryland in November, 1921, 59 colleges were approved as meeting the standards for colleges of arts and sciences adopted by the association in 1919. Attention was called to the fact that certain other colleges "can not at present be placed upon the approved list, because they do not fully meet the definition and standards, but they nevertheless approximate them, or have recently made marked progress toward meeting them." Eleven institutions were cited as falling in this group.

The association voted at its meeting in 1920 to establish a commission on secondary schools, the duties of which should be (1) to prepare a set of standards for first-grade secondary schools and to recommend modifications of those standards from time to time, and (2) to prepare and adopt one or more lists of schools in accordance with the approved sets of standards. The commission has not yet been formed.

THE AMERICAN BAR ASSOCIATION.

The question of requiring higher standards for admission to the bar has been considered by the American Bar Association upon a number of occasions. In 1918 the association "approved the action taken by many of the law schools in requiring two years of a college course as a condition of admission to their courses of study," and "expressed the conviction that this should be the minimum requirement recognized by law schools of the first class."

At its annual meeting in 1921 the association at the urgent solicitation of its Council on Legal Education and Admission to the Bar adopted the following resolutions:

The American Bar Association is of the opinion that every candidate for admission to the bar should give evidence of graduation from a law school complying with the following standards:

1. It shall require as a condition of admission at least two years' study in a college.
2. It shall require its students to pursue a course of three years' duration if they devote substantially all of their working time to their studies, and a longer course, equivalent in the number of working hours, if they devote only a part of their working time to their studies.
3. It shall provide an adequate library available for the use of students.
4. It shall have among its teachers a sufficient number giving their entire time to the school to insure actual personal acquaintance and influence with the whole student body.

At the same time the association directed the Council on Legal Education and Admission to the Bar from time to time to publish the names of those law schools which comply with the above standards for the benefit of intending students and others. The president of the association and council were directed to cooperate with State and

local bar associations and with the constituted authorities in the several States to secure the adoption of these standards as requirements for admission to the bar. Finally, the council was requested to call a national conference of representatives from State and local bar associations to consider the resolutions adopted by the association and to devise means of putting them into effect.

At the conference which was held in Washington February 23-24, 1922, there were delegates from bar associations in every State in the Union as well as a large number of representatives from the leading law schools of the country. Elihu Root, as chairman of the Council on Legal Education and Admission to the Bar, presented the resolutions which the bar association had adopted the previous year and urged the conference to approve them.

In support of these resolutions Mr. Root called attention eloquently to a number of alleged shortcomings of the bar, including the sacrifice of clients' interests, increased court expenses, and continual trial delays. At the same time he made it clear that the increasing mass of statute law and court decisions now require "not less, but more ability; not less, but more learning; not less, but more intellectual training in order to advise an honest man as to what his rights are and in order to get his rights for him." Finally, he pointed out that the increasingly complex social and economic legal questions growing out of modern industry, transportation, capital, and labor demand a careful selection of the fit from the unfit for service at the bar. Such a process, he maintained, can be attained through a requirement that students spend two years in college before entering a law school.

After further discussion by Chief Justice Taft and others, the standards of the bar association were approved and the conference adopted a resolution authorizing the creation of an advisory committee on legal education which should cooperate with the American Bar Association in the promotion of standards of legal education and admissions to the bar.

The effect of the action taken by the bar association and its sanction by the subsequent conference is likely to have marked effect on legal education. The publishing of the list of law schools which meet the association's standards and the campaign which the association is conducting for the adoption of these standards remind one of similar efforts which for many years the American Medical Association has made with such marked effect on medical education. If the standards of the bar association become effective, there is every reason to predict that the number of students who gain admission to the bar may fall off somewhat, but the ability and character of those who do enter the legal profession will doubtless be of a higher order.

ASSOCIATION OF AMERICAN LAW SCHOOLS.

This association, organized in 1900, has from time to time emphasized the necessity of establishing standards for law schools. In general it has recognized that this function belongs properly to the American Bar Association, but some idea of the standards which the Association of American Law Schools regards as desirable may be gained from the requirements which are imposed on the 55 institutions belonging to the association. The requirements are as follows:

1. After September 1, 1923, it shall require of all candidates for its degree at the time of their admission to the school either the completion of one year of college work or such work as would be accepted for admission to the second or sophomore year in the college of liberal arts of the State university or of the principal colleges and universities in the State where the law school is located and, after September 1, 1925, it shall require of all candidates for its degree at the time of their admission to the school either the completion of two years of college work or such work as would be accepted for admission to the third or junior year in the college of liberal arts of the State university or of the principal colleges and universities in the State where the law school is located.

2. It shall require of its candidates for the first degree in law resident study of law in day classes during a period of at least three years, 30 weeks each, and the completion of 60 credit hours in law. A credit hour in law consists of one hour of day classroom instruction per week for at least 15 weeks; provided, however, that night instruction may be given a credit value of three-fourths of that of day classroom instruction, but in no instance, except as herein provided [special action by the executive committee] shall more than 20 credit hours toward a law degree be given for such instruction.

Credit for night classroom instruction shall be given only when the candidate has passed written examinations in the subjects for which credit is given, which examinations shall be of the same standard as those given in corresponding subjects in the day school.

3. The conferring of its degree shall be conditioned upon the attainment of a grade of scholarship ascertained by examination.

4. It shall own a library of not less than 5,000 volumes.

5. Its faculty shall consist of at least three instructors who devote substantially all of their time to the work of the school.

6. Each member shall maintain a complete individual record of each student, which shall make readily accessible the following data: Credentials for admission; the action of the administrative officer passing thereon; date of admission; date of graduation or final dismissal from school; date of beginning and ending of each period; attendance, if the student has not been in continuous residence throughout the whole period of study; courses which he has taken, the grades therein, if any, and the credit values thereof, and courses for which he is registered; and a record of all special action of the faculty or administrative officers.

THE ASSOCIATION OF AMERICAN COLLEGES.

Dr. R. L. Kelly, executive secretary of the Association of American Colleges, makes the following statement concerning the activities of the organization and the institutions in which that association is particularly interested:

For the past two years the commission on the reorganization of the college curriculum of the Association of American Colleges has been making an intensive study

of the materials of the college curriculum since the World War, and the tendencies in the emphasis given to these materials. The study has extended to 100 colleges or more.

Four general conclusions have been reached: That the American college curriculum is becoming simplified, humanized, individualized. It is not becoming vocationalized.

The simplification shows itself in several ways. The reduction of padding in departmental announcement has gone so far with some colleges that they are actually teaching in a given year from 90 to 99 per cent of the courses announced in the catalogues. The number of departments in which a student may major is relatively small, some times in standard colleges going as low as nine or even seven. These results, furthermore, have not been secured by faculty prescriptions but come chiefly from the expression of student preference.

The humanizing or socializing tendency shows itself strikingly in the subjects usually taken by college students. The outstanding subjects are English, French, history, chemistry, mathematics, biology, political science, sociology, economics, psychology, education, and Bible. In other words, with the exception of mathematics, all the older "disciplinary" subjects are disappearing from the college curriculum and the modern subjects are gaining ground.

Colleges, however, are not all emphasizing the same subjects, although English is the master subject of practically all of them. In nearly all colleges also French and chemistry have heavy enrollment. As for the rest, the few subjects which are emphasized individually by the colleges when put together make a long list. Each college tends to preserve its own individuality; in other words, presumably offering or aspiring to offer a program which expresses its own peculiar disposition and character.

That the colleges are not becoming vocationalized is demonstrated by student registration. It is true that education is gaining as a college subject, particularly in women's and coeducational colleges, although the tendency often is to treat the subject rather as cultural than vocational. But home economics, law, medicine, journalism, commercial subjects, engineering, and the like have not strongly gripped the students of the liberal arts college.

The American college is extricating itself from the grip of hoary tradition on one side and is refusing on the other to lay large emphasis on the immediate means of earning a livelihood. It is still primarily a place of orientation.

THE AMERICAN COUNCIL ON EDUCATION.

The constituent membership of the American Council on Education is composed of representatives from national educational organizations. There are now 13 of these organizations, devoted primarily to the promotion of some special field of higher education, which are known as associate members. During the biennium the institutional members, from which the council receives nearly all its financial support, have increased from 120 to 143. The council continues to do its work primarily through the director and 12 standing committees.

At the annual meeting of the council in May, 1921, there was held a joint conference with the National Conference Committee on Standards of Colleges and Secondary Schools to consider the situation concerning the standardization of colleges and universities. Several persons described for the conference the progress which had been

made in this movement by the national and regional educational associations, the State departments of education, the Catholic Educational Association, and the Protestant Church boards of education. At the conclusion of the discussion it was apparent that, while there was a certain uniformity in the objects which the several accrediting agencies were seeking to attain, there was little uniformity in the standards which they applied. The conference therefore approved the report of a committee recommending the formulation of common standards for colleges, technological institutions, junior colleges, and teacher training institutions. It also requested the council to transmit to the accrediting agencies suggested unified statements of standards for these types of institutions for discussion and report as to adoption, and recommended that the council at an early time unify the present lists of accredited institutions.

In accordance with the recommendations of the conference a committee on college standards from the chief accrediting agencies of the country was appointed. This committee after a two-day session composed a statement of principles and standards, which has been distributed to the accrediting agencies of the country. Subcommittees on standards for junior colleges and teacher-training institutions will report similar statements later. In the meantime, the following accrediting agencies have adopted in whole or in part the statement for colleges and universities: Association of Colleges and Secondary Schools of the Southern States; Northwest Association of Secondary and Higher Schools; National Conference Committee on Standards of Colleges and Secondary Schools; Council of Church Boards of Education; Boards of Education of the Methodist Protestant Church and the Disciples of Christ; State departments of education in Maryland, Idaho, Florida, Connecticut, Oregon, and North Carolina.

The principles and standards suggested by the committee are as follows:

The term "college," as used below, is understood to designate all institutions of higher education which grant nonprofessional bachelor's degrees. The committee recommends to the various regional and national standardizing agencies as constituting minimum requirements the following principles and standards which should be observed in accrediting colleges:

1. A college should demand for admission the satisfactory completion of a four-year course in a secondary school approved by a recognized accrediting agency or the equivalent of such a course. The major portion of the secondary school course accepted for admission should be definitely correlated with the curriculum to which the student is admitted.
2. A college should require for graduation the completion of a minimum quantitative requirement of 120 semester hours of credit (or the equivalent in term hours, quarter hours, points, majors, or courses), with further scholastic qualitative requirements adapted by each institution to its conditions.

3. The size of the faculty should bear a definite relation to the type of institution, the number of students and the number of courses offered. For a college of approximately 100 students in a single curriculum the faculty should consist of at least eight heads of departments devoting full time to college work. With the growth of the student body the number of full-time teachers should be correspondingly increased. The development of varied curricula should involve the addition of further heads of departments.

The training of the members of the faculty of professional rank should include at least two years of study in their respective fields of teaching in a recognized graduate school. It is desirable that the training of the head of a department should be equivalent to that required for the doctor's degree, or should represent a corresponding professional or technical training. A college should be judged in large part by the ratio which the number of persons of professional rank with sound training, scholarly achievement, and successful experience as teachers bears to the total number of the teaching staff.

Teaching schedules exceeding 16 hours per week per instructor or classes (exclusive of lectures) of more than 30 students should be interpreted as endangering educational efficiency.

4. The minimum annual operating income for an accredited college, exclusive of payment of interest, annuities, etc., should be \$50,000, of which not less than \$25,000 should be derived from stable sources, other than students, preferably from permanent endowments. Increase in faculty, student body, and scope of instruction should be accompanied by increase in income from endowment. The financial status of each college should be judged in relation to its educational program.

5. The material equipment and upkeep of a college, including its buildings, lands, laboratories, apparatus, and libraries, and their efficient operation in relation to its educational progress, should also be considered when judging an institution.

A college should have a live, well-distributed, professionally administered library of at least 8,000 volumes, exclusive of public documents, bearing specifically upon the subjects taught and with a definite annual appropriation for the purchase of new books.

6. A college should not maintain a preparatory school as part of its college organization. If such a school is maintained under the college charter, it should be kept rigidly distinct and separate from the college in students, faculty, buildings, and discipline.

7. In determining the standing of a college, emphasis should be placed upon the character of the curriculum, the efficiency of instruction, the standard for regular degrees, the conservatism in granting honorary degrees, the tone of the institution and its success in stimulating and preparing students to do satisfactory work in recognized graduate, professional, or research institutions.

8. No college should be accredited until it has been inspected and reported upon by an agent or agents regularly appointed by the accrediting organization.

The committee on standards also authorized a republication of the unified list of accredited higher institutions first published by the council in 1920. The first list included the lists of accredited higher institutions prepared by the Association of Colleges and Secondary Schools of the Southern States, the North Central Association of Colleges and Secondary Schools, the Association of American Universities, and the University of California. To these lists were added the first list prepared by the Association of Colleges and Preparatory Schools of the Middle States and Maryland at its annual meeting in November, 1921. Although this unified list, by reason of the limited

territory or field of higher institutions covered by some of the accrediting agencies, does not by any means include all the higher institutions comparable in quality to those which have been included, it makes the nearest approach to a real national list of accredited higher institutions that now exists.

In 1920 the discussion of bills in Congress, chiefly the Smith-Towner bill providing for a Federal department of education and Federal aid to the States for definite designated educational purposes on condition that the States match the Federal appropriation, occupied a considerable amount of the council's attention. A referendum among the constituent and institutional members of the council was conducted. The director of the council summarized the results of the referendum as follows:

It is apparent that the membership of the American Council on Education is by no means in agreement with respect to any one of the large issues raised in the referendum ballot. All that the returns show are certain trends of opinion. The most important of these appear to be the following:

1. An overwhelming majority of the membership of the council voting favors the creation of a department of education.
2. An almost equally large majority of the council's membership believes that the Smith-Towner bill should be amended.
3. The amendment most generally favored is one providing for the inclusion of the Federal Board for Vocational Education in a new department from the outset.
4. Opinion is nearly evenly divided on the advisability of large Federal appropriations to the States on condition that the States match the appropriations.
5. A considerable majority favor the appointment of an advisory council by the department of education.

Perhaps the largest single enterprise which the American Council on Education has so far undertaken is that of sponsoring the so-called Educational Finance Inquiry. This study is a result of a meeting held by prominent educators at the time of the meeting of the Department of Superintendence in Atlantic City, February, 1921. As a result of this meeting a memorandum calling attention to the urgent need of a thorough investigation of educational resources and expenditures was submitted to several of the foundations interested in the promotion of education. Four of these foundations, the Commonwealth Fund, the General Education Board, the Carnegie Corporation, and the Milbank Memorial Fund, set aside a total of \$170,000 for the conduct of the investigation. The American Council on Education was selected as the agency to sponsor the investigation, and it is proceeding under a special commission headed by Prof. George D. Strayer. It is planned to make intensive studies in several typical States, such as New York, Illinois, and California. Reports on special phases of the investigation will be issued from time to time.

The committee on education for citizenship has cooperated with the educational experts of the War Department, under whose direction Profs. J. G. de Rouillac Hamilton and E. W. Knight, of the University of North Carolina, composed a report which was printed by that department, under the title of "Education for Citizenship."

Recently a committee of management of the University Center for Research in Washington was appointed to take care of the obvious need for assistance to graduate students who wish to come to Washington for periods of various lengths to pursue their research. So far the organization includes sections only in history and the social sciences. If the plan can be carried out, it should be of great benefit to graduate students.

At the annual meeting of the council in May, 1922, it was decided to establish a bureau of university and college personnel information. It is not expected that the bureau will resemble a teachers' agency, inasmuch as it contemplates assembling information rather than recommendations concerning college and university personnel. It was decided to limit the service to the higher institutions included in the list of accredited institutions published by the council.

The committee on international educational relations through subcommittees has adopted several reports on student credentials received from foreign countries. The following extracts from these reports contain the most important features:

I. GREAT BRITAIN.

It is the committee's judgment that the interchange of undergraduate students between distant countries (except as this is already provided for by the Rhodes Trust) should not be encouraged. It believes that as a rule men and women of the maturity of graduate students are the only ones who can derive enough profit from study in a foreign country to repay the effort involved. The committee, therefore, makes no general recommendation concerning the treatment of undergraduate students. It expects that American colleges and universities which receive undergraduates from British institutions will admit them to those classes or those courses that the record of their previous studies indicates they are qualified to enter.

The committee's recommendations are as follows:

1. That students or graduates of Canadian institutions who are candidates for admission to undergraduate or graduate standing at colleges and universities in the United States be classified for purposes of admission as if they had studied at American higher institutions.
2. That holders of the bachelor's degree from universities in England, Wales, and Ireland, and holders of the master's degree from universities in Scotland (the M. A. is the first degree at Scottish universities), be admitted to graduate registration in American universities, the status of each individual with reference to candidacy for a higher degree to be determined by the merits of his case.
3. That holders of the bachelor's degree from universities in Australia, New Zealand, and South Africa and from Government universities in India be admitted to graduate registration in American universities, the status of each individual with reference to candidacy for a higher degree to be determined by the merits of his case.

4. That administrative officers should note that many holders of the bachelor's degree from institutions mentioned in paragraphs 2 and 3 may need to spend at least two years in preparation for the master's degree at an American university. But men who have graduated with high honors from universities in the British Isles and from some of the institutions noted in paragraph 3 will ordinarily proceed to the master's degree at an American institution in the minimum period.

II. LATIN AMERICA.

The typical Latin-American secondary school resembles more closely the secondary schools of the countries of Continental Europe than the prevailing type of secondary school in the United States. The length of the secondary-school course varies in Latin-American countries. It may cover a period of four, five, or six years. The diploma or degree given upon the completion of the secondary-school course is commonly that of bachelor. In some cases this degree is conferred after four years of general secondary education and one or two years of professional preparatory work.

Specifically the committee recommends:

1. That holders of the bachelor's degree granted upon the completion of the secondary course in Latin-American countries be admitted provisionally to the freshman class of a college or university in the United States. At times it will be desirable that holders of the bachelor's degree who intend to enter a curriculum in engineering or chemistry should spend one year in a college of liberal arts before beginning their engineering or chemical training.
2. That holders of the bachelor's degree granted upon the completion of the secondary-school course in Latin-American countries be admitted provisionally to the freshman classes of colleges of agriculture or veterinary medicine.
3. That duly-accredited graduates of primary normal schools in Latin-American countries be admitted provisionally to the freshman class of a teachers' college or of a college of liberal arts in the United States.
4. That duly accredited graduates of higher normal schools should be entitled to advanced standing in a college of education or in a college of liberal arts in the United States, the precise amount of such advanced credit to be determined upon examination of the individual case.
5. That courses certified by diplomas from commercial schools of high standing in Latin-American countries be rated as equivalent to courses pursued at similar secondary institutions in the United States.
6. That Latin American students holding the bachelor's degree who have not pursued preprofessional courses after graduation from their respective secondary schools should be held to the same amount of preprofessional study as is required of students in the United States. This recommendation applies especially to the preprofessional requirements for the study of medicine, law, or dentistry.
7. All certificates and diplomas to be accepted by universities of the United States must be signed by the school authorities and their signatures certified by the diplomatic authorities of the country from which the applicant comes, as well as by the American diplomatic representatives in that country.
8. All certificates and diplomas to be given weight in the universities of the United States must state clearly the subjects covered, the exact extent of the subjects, the textbooks used, the amount of laboratory work completed, and the amount of time given to lecture and laboratory work in each case. The years in which the courses prescribed were successfully completed should also be noted.

III. FRANCE.

1. That the French "licence" be accepted as the equivalent of the American M. A. degree.
2. That holders of the baccalaureate who produce evidence of having done one year of graduate study in a French university be admitted to graduate standing.

3. That holders of the baccalaureate be admitted for one year as "unclassified students" and if they prove their fitness be then admitted to graduate standing.

The committee suggests that the holder of the French A. B. who enters an American college as a candidate for the bachelor's degree be admitted to that class, or to those courses that the record of his previous studies indicates he is qualified to enter, with due regard to the special graduation requirements of the college and to his knowledge of the English language. It is recommended that no French student be allowed to major in a study or group of studies in which he has not majored in his lycée course. In giving academic rating to holders of the French baccalaureate American college officers will naturally take into account the greater intensity of French secondary education, the consequent early intellectual maturity of French young men and women, and the fact that those who secure the baccalaureate have been subjected to a series of searching examinations that have eliminated a large percentage of the candidates.

Subsequent to this report an extensive supplementary statement on American and French higher degrees has been approved by the committee.

NATIONAL CONFERENCE COMMITTEE ON STANDARDS OF COLLEGES AND SECONDARY SCHOOLS.

For some time there has been some discussion as to whether the National Conference Committee might not perform its functions more effectively as a committee of the American Council on Education. In 1920, however, the committee preferred to become an associate member of the council. After the council was asked by the joint conference on college standards in May, 1921, to undertake the unification of college standards, it became clearer that there ought not to be two organizations operating in the same field. The National Conference Committee at a meeting in New York therefore adopted a motion to the effect that it would be willing to serve as the council's committee on standards and that it would be happy to have associated with it in the discharge of these duties any other persons appointed by the council. The council accepted the committee's offer and has merged with it the members of its own committee on standards, some of whom belonged to both committees.

THE AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS.

As stated in a circular of general information, the activities which have occupied the association up to the present time are illustrated by the titles of the special and standing committees.

In October, 1921, the association published a preliminary report of Committee W, on the status of women in college and university faculties. The study covered nearly all of the 176 higher institutions which at that time represented the membership of the association. In 29 colleges and universities for men only, there were among the nearly 2,000 professors only two women, one holding a professorship of third rank in the Harvard medical school and the other a professorship of the second rank in the Yale school of education.

On the other hand, in 14 colleges for women students only, the figures were as follows:

	Men.	Women.
Professors of first rank.....	131	163
Professors of second rank.....	34	133
Professors of third rank.....	33	119
Instructors.....	53	323
Total.....	251	738

THE NATIONAL RESEARCH COUNCIL.

The following statement concerning the work of the National Research Council during the biennium has been supplied by Dr. Vernon Kellogg, permanent secretary of the council:

In the two years from 1920 to 1922 the council has undergone much development, and has been initiator, sponsor, and to some degree financial supporter of numerous important projects of scientific investigation. Its activities are especially devoted to effecting cooperation and coordination in research work, and in bringing into closer contact the various agencies in America interested in the advance of science especially through fundamental research. To this end the council itself maintains contact on the one hand with colleges and universities from which comes a major part of the research output of the country as well as practically all of the trained personnel for research, and on the other hand with the engineering, industrial, and commercial interests based on the applications of science. The council also maintains an intimate contact with the major national scientific and technologic societies. Indeed its membership is chiefly made up of accredited representatives from nearly 80 such societies.

A gift of \$5,000,000 from the Carnegie Corporation of New York has provided the council with means for the erection of a dignified building in Washington, now in course of erection, for its housing, together with the housing of the National Academy of Sciences, under whose congressional charter it is organized. The remainder of the Carnegie Corporation gift is to be held as a permanent endowment for the council.

In addition to this gift for building and endowment the council has received about \$2,000,000 in special gifts for the support of special scientific undertakings. One million of this, coming from the Rockefeller Foundation (\$750,000) and General Education Board (\$250,000), is devoted to the maintenance through five years of a series of research fellowships in physics and chemistry and a series of fellowships in medicine. Candidates for these fellowships must have already attained a degree of Ph. D. or M. D., and be possessed of unusual qualifications for research or advanced work.

It is not possible in this brief space to present a list of the various research projects now sponsored by the council, but it is one showing a wide variety of undertakings revealing a high degree of cooperation among scientific men and organizations. Its various items represent work in the fields of mathematics, physics, chemistry, geology and geography, anthropology, biology, psychology, medicine, agriculture, and engineering.

The council has special divisions of international, Federal, States, and educational relations, through which it maintains relations with foreign scientific organizations, Government departments and scientific bureaus, State scientific bureaus, and the colleges and universities and educational organizations.

Since its organization a number of other countries have set up somewhat similar institutions, sometimes under the same name, National Research Council, as in Australia and Japan, sometimes under other names suggesting, however, the same aims. A number of these organizations together with other officially recognized national scientific bodies are federated as the International Research Council, with headquarters at Brussels, with which are associated several International unions representing various special fields of the physical and biological sciences.

CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING.

During the biennium the Carnegie Foundation for the Advancement of Teaching added to its list of exhaustive educational studies a notable volume entitled *Training for the Public Profession of the Law*. The study was undertaken in 1913 at the request of the committee on legal education and admissions to the bar of the American Bar Association.

The author of the study, Mr. A. Z. Reed, after tracing the growth of law schools in this country and the effect which these institutions have had on the rules for admission to the bar, arrives at the conclusion that legal education in law schools has almost entirely supplanted the law office method of securing a legal education, with results some of which are desirable and others which are unfortunate. In the first place inadequate attention is now given to the value of office training and experience. In line with modern theories of engineering education Mr. Reed contends that "theoretical instruction shall be correlated with some sort of practical activity pursued outside of the school."

Another unfortunate circumstance, partly caused by the lack of proper professional spirit among lawyers and partly traceable to the growing influence of the law schools, has been the assumption that all lawyers should constitute a single homogeneous body with no attempt at differentiation, as in England. As a result of this conception all law-school students take the same curriculum and all candidates for admission to the bar in a State are prepared for the same examination. In some States the law schools have even secured an exemption from all bar examinations for their graduates.

The author is convinced that a new professional spirit among lawyers is highly desirable and that "it is only through cooperation between a school which intelligently devises the means and a profession which properly defines the ends that sound professional training can be established." The logical conclusion is of course that the professional practitioners should assume control of bar admission requirements and examinations.

If the professional practitioners regain control of bar admissions the author believes that there will be a far better chance of installing in this country a system somewhat similar to the differentiation made in England between barristers on the one hand and attorneys

and solicitors on the other. Such a differentiation would in the author's opinion not only tend to raise the level of the profession, but it would of course compel the law schools to throw over the regulation three-year curriculum in "judge-made technical law," which prepares a "standardized lawyer," and respond to the demand for specialized legal training.

The following quotation from the report emphasizes the importance of this matter:

The scholarly law-school dean properly seeks to build up a "nursery for judges" that will make American law what American law ought to be. The practitioner bar examiner, with his satellite schools, properly seeks to prepare students for the immediate practice of the law as it is. The night-school authorities, finally, see most clearly that the interests not only of the individual but of the community demand that participation in the making and administration of the law shall be kept accessible to Lincoln's plain people. All these are worthy ideals. Taken together, they roughly embrace the service that the public expects from its law schools as a whole. But no single institution, pursuing its special aim, can attain both the others as well. Attempts by each type of law school to carry the entire burden of legal education produce such unsuccessful results as to bring the entire body of practitioners into disrepute. The representatives of the several types must begin to face the problem of legal education in a broader spirit than some of them have recently displayed, if judges, lawyers, and politicians are to regain that place in popular esteem which is essential to a law-abiding community.

Once it is recognized that a unitary bar not only can not be made to work satisfactorily but can not even be made to exist, then the development of our present differentiated system into one that shall produce better results will be a slow process. It can be begun at once, but it may not be completed by those now living. The amount of time that students can reasonably be expected to devote to their education, both preliminary and professional, determines the curriculum and methods of each type of school; and these in turn determine the character of the subsequent bar admission tests. It is impossible to reverse the process and provide adequate professional tests to which all schools shall conform. Only in so far as bar examinations are adjusted to the training that is practicable for the particular type will they be of service in insuring high standards of proficiency among those admitted to the bar. Only in this way can completely incompetent individuals be prevented from securing the privilege of practicing law. Only in this way can each school be aided to develop its own training up to the limits of its possible development.

The author shows that in recent years there have been four outstanding developments in legal education: (1) The teaching on the part of the larger law schools of national law instead of local or severely practical law; (2) the use of the case method; (3) the growth of evening law schools; (4) the growth of preprofessional college requirements.

In connection with the growth of evening instruction the author points out that from 1889-90 to 1915-16 the number of students in law schools devoted solely to day instruction grew from 3,949 to 11,469, whereas the number of students in night schools and in schools giving instruction both in day and evening classes grew

from 537 to 10,734. The significance of the night schools is therefore apparent, and the author believes that the growth of these schools is related directly to the demand that legal education be made accessible to all classes of people, a situation which in the interest of preventing the legal profession from falling into the control of any single class of people is devoutly to be hoped for. The author points out, however, that the educational standards in evening schools should not be inferior to those of the day schools, and that therefore evening schools may legitimately be expected and required to increase their law course to more than the usual three years.

A number of the larger law schools have in recent years established one or two years of collegiate training as a requirement for entrance. The author points out that these law schools have had one or both of the following objects in mind: (1) Training in certain prelegal subjects, such as history and political science, and (2) general cultural training. At the conclusion of the report there is a table classifying the law schools. In a later annual report of the Carnegie Foundation the author uses the same classification for 1921-22, as follows:

1. Schools offering courses of standard length:
 - (a) Two years or more of college training required, 32 schools.
 - (b) Low-entrance full-time schools, 35.
 - (c) Part-time schools, 60.
 - (d) Mixed full-time and part-time schools, 11.
 2. Offering courses of less than standard length:
 - (a) Full-time schools, 2.
 - (b) Part-time schools, 7.
- Total number of schools, 147.

TEACHERS' INSURANCE AND ANNUITY ASSOCIATION.

On June 30, 1922, 77 colleges and universities had adopted the contractual plan of old-age annuities through the Teachers' Insurance and Annuity Association.

The number of insurance policies and annuity contracts in force at various dates were as follows:

Date.	Insurance policies.	Total insurance.	Number annuity contracts.	Total annuity.
Oct. 1, 1919.....	174	\$784,336	113	\$109,438
Oct. 1, 1920.....	553	2,795,298	450	494,915
Oct. 1, 1921.....	982	4,973,175	776	917,099
June 30, 1922.....	1,415	7,422,921	1,142	1,432,665

In March, 1921, a canvass of the policyholders of the association was made to ascertain whether the selection of 4 of the 16 trustees of the association would be a satisfactory basis of representation of the policyholders on the board. About one-half of the policyholders

voted almost unanimously to accept the suggested representation on the board. Accordingly arrangements have been made whereby a committee composed of policyholders will each year nominate five persons. The policyholders will in turn select three persons, not necessarily from the five nominated by the committee. The Carnegie Corporation will then elect one of the three to the board. Each nominating committee selects its successor. Eventually there will be four representatives from the policyholders on the board.

Says the report of the committee:

If it has proved true, as seems to be universally admitted, that a certain number of men in the faculty of a college for women gives a better balanced and more stimulating leadership to the students, it may well be asked seriously whether our colleges for men are not blindly following a medieval tradition to the detriment of the students in excluding women entirely from their faculties. This idea seems to be gaining ground.

Among 104 coeducational colleges and universities the following table shows the distribution of the faculty:

Subjects.	Full professors.		Associate professors.		Assistant professors.		Instructors.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Academic.....	2,147	95	623	71	903	106	1,319	544
Education.....	190	9	42	17	49	15	34	43
Engineering.....	431	0	162	3	275	4	478	14
Medicine.....	826	4	267	3	352	14	876	17
Law.....	224	0	13	0	16	0	22	1
Commerce.....	54	1	17	0	43	3	109	26
Agriculture.....	348	0	139	0	267	2	218	12
Journalism.....	18	0	4	0	11	3	10	4
Music.....	130	19	14	5	18	13	120	14
Bible or theology.....	81	0	4	2	5	3	13	1
Home economics.....	1	53	1	34	0	95	0	243
Physical education.....	46	9	15	10	27	34	77	100
Military science.....	64	0	6	0	56	0	34	0
Total.....	4,500	190	1,307	145	2,022	292	3,314	1,019

Committee G (methods of increasing the intellectual interest and raising the intellectual standards of undergraduates) has listed a number of specific methods which fall under three main headings: (1) Those which depend primarily upon the quality of the intellectual interest and standards of the faculty; (2) the conditions of instruction and of curricular administration; (3) the general conditions of undergraduate life. The committee is now busy formulating an exhaustive bibliography for the several methods included under these main headings.

STUDIES IN COLLEGE ENTRANCE REQUIREMENTS.

During the past biennium two noteworthy studies have been made on the subject of college entrance requirements by Dr. W. C. John, of the United States Bureau of Education, and Dr. Clyde Furst, secretary of the Carnegie Foundation for the Advancement of Teaching.

Doctor Furst's study covers the 125 higher institutions on the approved list of the Association of American Universities in 1918, not including institutions in that list that give only technical degrees. In order to show the developments of recent years the requirements of these institutions in 1920 are compared with the requirements in the same institutions in 1912. Several institutions had more than one method of admitting students, which accounts for the larger number of instances in the following table:

Required units.	1912	1920
14.....	45	3
14½.....	39	25
15.....	91	145
15½.....	3	5
16.....	7	9
16½.....	3	2
17.....	1	0

The most significant change has been in the number of units which were prescribed by the institutions in 1912 and 1920, respectively.

Units.	1912		1920	
	Number.	Percentage.	Number.	Percentage.
Free units.....	101	3.6	3484	12.3
Elective units.....	6594	23.7	6074	24.6
Alternative units.....	0	0	5194	18.3
Prescribed units.....	2,0254	72.7	1,2684	44.8
Total.....	2,786	100.0	2,834	100.0

This table shows conclusively that although the elective units remain about the same, there has been in the number of prescribed units a great falling off, which has been absorbed chiefly in the alternate units and to a less extent in the free units. In 1912 it was the general custom to prescribe about 12 of the entrance units and in 1920 about 6½. In the reduction of prescribed units all the subjects except English suffered. The sciences and history and civics suffered the most.

Subsequently Doctor Furst made a study of the entrance situation at 40 of the 46 colleges belonging to the Association of Colleges and Secondary Schools of the Southern States in 1920. The data cover the year 1921-22. This study shows that 96.6 per cent of the entering students that year were admitted on certificates only; 2.7 per cent by certificate and examination; and 7 per cent by examination only. The study also reveals that 9.2 per cent of the students presented less than 15 units; 74.1 per cent from 15 to 16 units, inclusive; and 16.7 per cent more than 16 units. It is clear that a number of institutions

may be accepting units which represent less than one-fourth of a school year's work.

A comparison of the southern institutions in 1922 with the 125 institutions in 1920 shows that the former are more conservative concerning entrance requirements. The southern institutions prescribe 51.5 per cent and allow alternate units 12.8 per cent, elective units, 33.2 per cent, and free units 2.5 per cent, as against 44.8 per cent, 18.3 per cent, 24.6 per cent, and 12.3 per cent, respectively, in the 125 institutions.

The study made by Doctor John is distinctive, because it includes college graduation requirements, as well as entrance requirements, and because it makes a comparison of the practice at 51 State universities and colleges with 50 endowed universities and colleges. The data cover the year 1916-17. The situation concerning prescribed and elective units is shown in the following table:

Averages of college entrance requirements.

Degrees.	Prescribed units.						Elective units.
	English.	Foreign language.	Mathematics.	Science.	Social science.	Average. ¹	
A. B. degree:							
State institutions.....	2.95	3.35	2.19	1.12	1.20	9.02	5.17
Endowed institutions.....	3.01	4.86	2.58	1.23	1.11	10.77	4.32
B. S. degree:							
State institutions.....	2.95	2.41	2.30	1.26	1.37	7.83	7.45
Endowed institutions.....	2.66	2.96	2.51	1.30	1.12	9.44	5.38

¹ The figures in this column are not a total of the averages of the prescribed units, but a true average.

The graduation requirements for the bachelor of arts and bachelor of science degrees, respectively, for the two types of higher institutions are shown in the following table:

Averages of prescribed graduation subjects for the A. B. and B. S. degrees.

Subjects.	A. B. degree.				B. S. degree.			
	State.		Endowed.		State.		Endowed.	
	Semester hours.	Per cent.	Semester hours.	Per cent.	Semester hours.	Per cent.	Semester hours.	Per cent.
Bible.....			6.00	4.37			7.16	5.06
Philosophy and psychology.....	7.00	5.65	7.56		8.00	6.38	6.92	4.56
Social science.....	10.65	8.44	12.14	8.86	9.70	7.59	6.81	5.35
Mathematics.....	7.00	5.65	6.94	5.46	8.93	7.11	8.56	6.77
Foreign language.....	15.19	13.80	20.66	15.94	12.09	9.58	15.62	12.79
English.....	9.02	7.50	9.65	7.44	9.65	6.34	8.77	6.81
Science.....	11.48	9.19	11.44	8.52	22.88	19.51	18.15	13.72

The most significant of the tables prepared by Doctor John is that which shows the total prescriptions in each subject for the eight years of high school and college at the two types of institutions. The table is as follows:

General averages of college entrance requirements and graduation requirements for the A. B. and B. S. degrees.

Degrees.	English.	Foreign language.	Mathematics.	Science.	Social science.	Philosophy and psychology.	Bible.	Education.	Prescribed.	Elective.
A. B.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
State.....	15.12	15.55	8.59	6.32	6.40	2.82	0.75	1.14	48.01	51.16
Endowed.....	13.53	23.33	10.24	5.62	5.35	2.85	2.16	1.96	57.34	42.67
B. S.										
State.....	13.74	10.11	10.40	10.49	6.14	3.18			49.71	50.28
Endowed.....	12.96	15.73	11.46	8.09	3.90	2.27	2.52		52.55	47.54

¹ The figures in this column are not a total of the general averages, but a true average.

SOLUTION FOR THE GROWTH IN NUMBERS OF COLLEGE AND UNIVERSITY STUDENTS.

The enormous increase in student attendance at universities and colleges since the World War has been the subject of universal discussion and no little apprehension. If there were any certainty that the increasing multitude of students knocking at the college doors were uniformly of superior mental ability and that they had taken a secondary course of study which was thoroughly preparatory to the college curriculum which they desire to enter, the problem of the higher institutions would be much simplified. It would consist merely in finding by hook or crook some financial means of caring for the larger numbers of students.

Unfortunately, however, in responding to an insistent demand for less domination of the secondary curriculum from above, the higher institutions have been forced to reduce the number of prescribed units to the minimum. Certain States, for example Kansas, have practically thrown all specific entrance requirements aside by requiring the admission into the State higher institutions of all graduates from accredited high schools in the State. Such a practice permits students who have followed vocational courses of study to enter curricula for which they have wholly inadequate preparation, and compels the institution, if it protects its standards, to lengthen its curricula or pursue a rigid policy of elimination. In either case, a vast amount of injustice is done to the well prepared and the poorly prepared students. Whatever portion, therefore, of the recent influx of students into the colleges is due to the admission of students who have inadequate preparation for college work, is not a cause for general rejoicing. Such students usually find it necessary to drop

out of college, or they perform their work only with great difficulty. In the meantime they complicate seriously the ability of the institution to realize its educational aims, or they tempt it to be satisfied with a lower standard of work. It is no wonder, therefore, that there is unusual interest in such experiments as the common freshman year at Yale University, which aims to assimilate a great variety of freshmen in the shortest possible time, and in the program of the junior college, which aims to link up again the first two years of college with the work pursued in the high school.

On the other hand it seems equally clear that in the increasing multitude of students there is no assurance that the higher institutions are securing a high proportion of the young people of superior mental ability while being guarded against those who, though their secondary education may be satisfactory, are not mentally capable of satisfactory work on a higher education level. The tests made in the Army during the World War confirmed the first suspicion, and the second is being proved daily in every higher institution in the country.

The case is stated concisely by a report on the use of intelligence examinations in Columbia College in 1922, which is as follows:

Many a student does and should graduate from high school without being a suitable subject for a college education, just as many a student graduates and should graduate from college who is not of Ph. D. caliber. Our acceptance of the State examinations has meant that almost any New York high-school graduate had met our entrance requirements. Our open door to New York consequently admitted a good many students who did not belong in college. On the whole, the quality of the candidates presenting themselves with these credentials has deteriorated in the past few years.

On account of this situation, which is being experienced quite generally over the country, there have been a variety of expedients to which higher institutions have been forced. New York State has showed educational wisdom in requiring an average distinctly above the passing mark for its college entrance diploma. Goucher College requires an average high-school record of 80 per cent. Other institutions have resorted to similar devices, and there has been much discussion at the annual meetings of various associations of this problem in connection with the great growth in student numbers. Friends of the new intelligence tests are confident that these tests will help materially to solve this problem. They state frankly that the intelligence tests alone are not a satisfactory method of selecting students. The high-school record shows the degree of preparation for the curriculum which the student desires to enter. His record from the high school should also show whether he has acceptable mental and moral qualities. To these evidences are added the results of the intelligence tests, so that college officials have very satisfactory evidence of the ability, preparation, and moral qualities

of students who apply for admission to college. Thus far the officials at Columbia College and numerous other institutions of higher learning have found a very close correlation between the results of these examinations and the usual records and grades of students.

President Walter Dill Scott, of Northwestern University, makes the following statement concerning the intelligence tests and one of the important uses to which they should be put:

The time is past for discussing the effectiveness of mental alertness tests. They are effective. The executives of colleges and of universities must direct their future development and use for prospective freshmen. * * *

The time has arrived for a new epoch in our system of education. It is an epoch in which the form of training will not be determined by such standards as the needs of the adult society or the available courses of instruction, but primarily by the needs of the youth to be educated. An essential part of such an educational system will be vocational and educational advice given by members of the teaching staff, by the dean, by members of the department of education, or by an expert bearing some such title as educational counselor or preferably personnel director. The personnel director will perform an educational function similar to that of the diagnostician in medicine. The instructors of the various courses will perform a function similar to that of the experts in the various curative specialties. * * *

The personnel director will need to know as much as possible of the training, the interest, the ambition, the talents, and the educational needs of all students and of all prospective students. The giving of mental alertness tests will be as much a matter of the routine with such a personnel director as is the use of the clinical thermometer by the diagnostician in medicine.

At the hands of a personnel director no prospective student will be ruthlessly eliminated, although the vocational or educational guidance given him may be to send him to another institution of higher learning or to some other place even better adapted to his needs.

THE RESIDENCE OF UNIVERSITY AND COLLEGE STUDENTS.

During the past biennium two studies have been made on the subject of the residence of university and college students, one by Dr. R. L. Kelly, executive secretary of the Association of American Colleges, and the other by the United States Bureau of Education. No study of this character has been made since the two which were completed by Mr. L. A. Kalbach, of the Bureau of Education, for the years 1887-88 and 1896-97, respectively. The present Bureau of Education study covers all types of higher institutions except the normal schools and independent theological schools. It reveals conclusively for the first time that the proportion of students to population is greatest in the States west of the Mississippi River and lowest, as would be expected on account of the large Negro population, in the Southern States. In other words, although the larger and more famous institutions are usually found east of the Mississippi River, and north of the Ohio River, they do not draw so large proportions of their population into colleges and universities as do the Western States. The leading States, in this respect, are Oregon, Iowa, Utah,

Kansas, Nebraska, and Washington. Tennessee, Arkansas, and New Mexico bring up the rear.

Another interesting fact is that the well-developed Middle Western and far Western States exceed the other States in the proportion of their students that are taken care of in their own institutions. The average for all the States is 74.9 per cent. In other words, taking the country as a whole, three students out of every four go to university or college in their home State. In this respect, California, Oregon, Utah, Michigan, Nebraska, and New York lead the other States. New Jersey is at the bottom of the list, accommodating only 18.2 per cent of her students in her own institutions. Other low States are Connecticut, Wyoming, Delaware, Idaho, and New Mexico.

Notwithstanding the fact that some of the States do not have a high proportion of their students in their own institutions, they have a great drawing power on students from other States. Other States have great drawing power, both on students from within and without their respective boundaries. Consequently certain States enroll in their higher institutions more students than they have residents in college. The most conspicuous of these States are: Oregon, California, Colorado, New York, Illinois, New Hampshire, Massachusetts, Michigan, Pennsylvania, and Virginia. The States which are not taking care of so many students as reside in those States, respectively, are Idaho, Montana, South Dakota, Wyoming, Connecticut, North Dakota, Oklahoma, New Jersey, Maine, West Virginia, South Carolina, Mississippi, North Carolina, Arkansas, Kentucky, Alabama, Florida, and Texas.

The study on this subject conducted by Dr. R. L. Kelly is restricted to a much smaller group of higher institutions, most of which are colleges either under independent or Protestant control. The data with a few exceptions cover the year 1918-19.

SALARIES AT STATE INSTITUTIONS OF HIGHER LEARNING.

For several years the Bureau of Education has been gathering salary statistics at the State institutions of higher learning. The following table shows a comparison of salaries for the several grades of the faculty:

Officers of instruction.	Median average salary, 1915-16.	Median average salary, 1921-22.	Per cent of increase.
Professor.....	\$2,400	\$3,392	41.3
Associated professor.....	1,926	2,800	45.4
Assistant professor.....	1,603	2,300	43.5
Instructor.....	1,184	1,800	52.0

In using these figures it should be noted that in 1915-16 no allowances were made for houses, heat, or light furnished by institutions to faculty members free of charge, whereas in 1921-22 the institutions were asked to estimate the value of these services where given and to include the amount in the salaries. Probably few if any salaries of faculty members below the rank of full professors were affected by this difference in the basis of securing the salary statistics.

THE COST OF HIGHER EDUCATION

With the enormous increase of students and the consequent strain placed on the financial resources of higher institutions, much attention has been paid to the cost of education in our higher institutions. Some persons have been apprehensive as to whether the States can continue for long to increase annually or biennially the appropriations necessary to take care of more and more students. Tuitions and fees have quite generally been raised, but complete relief is by no means in sight.

On account of this situation college and university executives have been forced to resort to unusual means to insure the economical expenditure of their incomes. Much of the demand for surveys of higher institutions arises from the desire to know whether the institutions are using their funds to the best advantage. There has been much discussion of the use of per capita cost studies made by the Bureau of Education and such agencies as the Joint Board of Higher Curricula in Washington.

At the National Association of State Universities, President Kane, of the University of North Dakota, outlined an elaborate plan for securing comparable per capita cost statistics. The Educational Finance Inquiry, cooperating with the United States Bureau of Education, is now getting data for a comprehensive survey of the cost of higher education.

The discussion of per capita cost statistics reveals the necessity for extreme care in procuring comparable data. In view of the different practices among the several institutions and the difficulty of providing a schedule which will be interpreted in a uniform way, it seems highly desirable that information be secured from the higher institutions by personal visits.

THE PURNELL BILL.

Of the bills touching the higher institutions which were introduced into Congress during the last biennium, one of the most important is the Purnell bill. This bill is the result of the unfavorable economic effects of the World War on the agricultural experiment stations. In order to remedy this situation the Association of Land-Grant

Colleges in 1920 decided to ask for further Federal aid. Accordingly the bill provides that, in addition to the \$30,000 now received annually through the Hatch and Adams Acts, there shall be an initial appropriation of \$15,000, which shall increase by \$10,000 each year until the annual appropriation reaches \$85,000, at which figure the additional annual appropriations are to remain.

The purpose for which the proposed additional appropriations may be used are considerably more extensive than under the Hatch and Adams Acts. The bill states:

The funds appropriated pursuant to this act shall be applied only to paying the necessary expenses of conducting investigations or making experiments bearing directly on the production, manufacture, preparation, use, distribution, and marketing of agricultural products, and including such scientific researches as have for their purpose the establishment and maintenance of a permanent and efficient agricultural industry, and such economic and sociological investigations as have for their purpose the development and improvement of the rural home and rural life, and for printing and disseminating the results of said researches.

In accordance with the precedent established in connection with the Hatch and Adams Acts the bill does not require the States to match the Federal appropriations. The Purnell bill was not enacted into law.

REHABILITATION OF UNITED STATES WORLD WAR VETERANS.

A report issued by the United States Veterans' Bureau shows that up to May 24, 1922, veterans of the World War had been rehabilitated by educational institutions as follows: Universities, 162; colleges, 253; State normal schools, 98; professional schools, 303; industrial schools, 858; commercial schools, 1,041; public schools, 244; others, 269; total, 3,228.

Obviously the higher institutions have opened their doors very freely to accommodate the World War veterans. Indeed, they have at some inconvenience endeavored to adjust their equipment and faculty so as to provide the types of training needed by the veterans.

THE RESERVE OFFICERS' TRAINING CORPS.

There has now been sufficient time for the higher institutions to adjust themselves to the Reserve Officers' Training Corps, and substantial progress has therefore been made during the biennium. The number and variety of units, together with the enrollment, have increased. There are more officers on duty, and the number of students enrolled in the advanced courses has grown satisfactorily.

The following table shows the comparison between the number of units and the number of students enrolled for 1919-20 and 1921-22, respectively:

Senior units.	1919-20.		1921-22 ¹	
	Units.	Enrollment.	Units.	Enrollment.
Infantry.....	119	32,390	97	35,695
Field Artillery.....	20	4,348	20	6,648
Engineer Corps.....	19	1,948	21	3,417
Coast Artillery.....	18	2,687	19	3,562
Signal Corps.....	11	704	11	1,577
Cavalry.....	10	918	11	2,255
Motor Transport Corps.....	8	461	9	920
Ordnance Department.....	3	201	8	621
Medical Corps.....			23	1,205
Dental Corps.....			8	692
Air Service.....			6	687
Veterinary.....			4	147
Total.....	208	43,687	237	57,419

¹ Beginning of the second semester.

Of the 57,419 students in 1921-22, 49,225 were enrolled in the basic, or first two years, and 8,194 in the advanced course.

The junior division units are located in the secondary schools, including public and private high schools and military colleges doing secondary school work. During the year 1921-22, there were 105 units and 38,523 enrollments in the junior division, as compared to 68 units and 44,777 enrollments in 1919-20.

With the removal in 1920 of the limit on the number of Army officers who might be detailed for service with the R. O. T. C., the number of such officers has been increased from 388 to 815. In addition, during the year 1921-22 there were 39 warrant officers and 1,205 noncommissioned officers and enlisted men detailed for service with the R. O. T. C.

The number of students who complete the prescribed work of the advanced course and apply for commissions in the R. O. T. C. constitutes of course the real test of the R. O. T. C. in the colleges and universities. In the year ended June, 1920, 982 students completed this work. Of these men, 483 were 21 years of age or older and were therefore eligible for commissions.

INSTITUTE OF INTERNATIONAL EDUCATION.

The Institute of International Education has continued vigorously its program of promoting the exchange of professors and students between the United States and foreign countries. A number of professors from foreign universities have lectured at American higher institutions under the auspices of the institute. Official visitors from other countries have been assisted in securing the information

they seek. In February, 1920, the Carnegie Endowment for International Peace appropriated \$12,500 for grants to American professors on leave of absence. The grants are made on condition that the professor lectures for at least one semester in a foreign university, and that he submit a report of his observations on educational conditions in the country which he visits. The amount of the grant varies with the cost of travel to and from the country which is visited.

A number of direct exchanges of professors between an American university and a foreign institution have been arranged by the institute. Also under its auspices seven higher institutions, with strong technical divisions contributed in 1921 \$1,000 each to send a distinguished American professor of applied science or engineering to lecture in French universities in exchange for a French professor who lectured very acceptably for one month at each of the contributing American universities.

The institute has devoted a considerable amount of time to the formation and stimulation of international relations clubs, chiefly in the smaller higher institutions. A large number of books dealing with international relations, together with a number of syllabi on the League of Nations, the Monroe Doctrine, the limitation of armament and the recent history of Russia, the Balkans, Mexico, China, the Baltic States, Latin America, and Japan have been distributed to each of the clubs. The director has also visited in person a large number of higher institutions in order to stimulate work of this character.

For the benefit of foreign students the institute has continued its bulletins of information concerning educational opportunities in this and other countries. The most important of these publications during the last biennium are, A Guide Book for Foreign Students in the United States; Opportunities for Higher Education in Italy; Bibliography on the United States for Foreigners.

A joint appeal made by the officers of the institute, the American Council on Education, and the American University Union in Europe, in connection with the campaign for relief in central Europe, succeeded in raising \$300,000 to aid destitute teachers and students in central Europe.

THE AMERICAN UNIVERSITY UNION IN EUROPE.

The offices of the American University Union in Europe during the present biennium have been thoroughly transformed into peacetime activities. Under these circumstances it has been much easier for them to perform the function of "intellectual embassies." In numerous ways the London and Paris branches have assisted American students to enter higher institutions abroad and to secure expeditiously permission to use libraries and museums. The directors have

also been active in promoting a number of important conferences looking to clearing up difficulties in the exchange of students between the United States and other countries, as, for example, the equivalence of French and British degrees with American degrees, recognition in Great Britain of the certificates granted by the National Board of Medical Examiners, the Anglo-American Conference of Professors of History organized by the University of London.

The union is chiefly supported by dues from about 50 higher institutions in the United States. During the biennium ended August 31, 1921, it also received \$15,000 from the Rockefeller Foundation. At that time there had been subscribed \$22,029, of which nearly one-half was paid toward a permanent endowment fund. The municipality of Paris still holds open the plot of ground which it granted to the union in 1917, but so far it has not been possible to erect the *Maison des Etudiants*.

INTERNATIONAL FELLOWSHIPS AND SCHOLARSHIPS.

International fellowships and scholarships continue to be a popular form of promoting international educational relations. In September, 1920, as a result of the scholarships given by American colleges, 32 French girls were selected to come to the United States. Forty-two additional French girls held similar scholarships for a second year. Nineteen French men also came to the United States on funds raised by American Army students in France. In May, 1922, it was said that there were 50 scholarships being given by American institutions to French men and women.

During the biennium from 30 to 50 Serbian students were maintained at American colleges under the auspices of the International Serbian Educational Committee. The Russian Students' Christian Association has also been instrumental in providing funds for the support of a considerable number of Russian students in this country.

Through the American Council on Education 25 American young women were selected in 1922 to receive the scholarships offered by the French Government in seven of the leading lycées of France. Scholarships for graduate work were also offered to American men and women at several of the universities and écoles normales.

In 1921 about 30 fellowships were awarded by the Society for American Field Service Fellowships to graduates of American colleges for study and research in French universities.

The American-Scandinavian Foundation awards each year 20 fellowships worth \$1,000 each to American students for study in Norway and Denmark. A similar number of students from those countries secure fellowships from the same foundation for study in this country.

The surplus funds of the Commission for Relief of Belgium have been used to establish the so-called *Foundation Universitaire*, for the promotion of education and research in Belgium. Twenty-four scholarships have been granted to Belgian students in American universities. Also a limited number of graduate fellowships have been awarded to American students for study in Belgium for the year 1922-23.

This list of fellowships and scholarships includes only those granted by the most prominent foundations and societies. A large number of additional scholarships and fellowships for study abroad are granted by individual colleges, universities, and other organizations. In 1920-21, it was said that there were 362 American students studying in Great Britain. In the previous year there were 280 American students in France.

THE RHODES' SCHOLARS.

In recent years there have been numerous suggestions from time to time that the hopes and expectations of the founder of the Rhodes scholarships were not being fulfilled; that the Rhodes scholars did not adequately represent American higher institutions; and that their influence in their country after their return from abroad was disappointing. It should be realized that these suggestions have in nearly every instance been an expression of personal opinion not based on adequate statistical or other data. In 1921, it occurred to President Frank Aydelotte, of Swarthmore College, and secretary of the Alumni Association of American Rhodes Scholars, that a study should be made to determine, if possible, the accomplishments of the American Rhodes scholars before, during, and after their residence at Oxford. The study was made by R. W. Burgess, professor of mathematics at Brown University.

The study revealed that the average age of the scholars at appointment was 22 years and 4 months; that they represented 150 different American higher institutions; that of those who were known to be eligible for the Phi Beta Kappa, 78 per cent have been elected to that organization; and that 42 per cent were members of some athletic team while in college in this country. The statistics also showed the college preparation of the appointees to be as follows: (1) Less than four years in college, 14 per cent; (2) graduates of colleges, 67 per cent; (3) at least one year of postgraduate work, 19 per cent.

The subjects which the Rhodes scholars studied at Oxford are indicated in the following table. The table covers the classes matriculating from 1904 to 1914.

Subjects studied by American Rhodes scholars at Oxford.

	Number.	Per cent of total.
Law.....	115	32.7
Modern history and economics.....	60	17.1
Humanities, including the classics, philosophy (a) and anthropology (4).....	59	16.8
English language and literature.....	26	7.4
Theology.....	25	7.1
Mathematics, physics, chemistry, and engineering.....	21	6.0
French, German, and Spanish.....	13	3.7
Physiology and medical subjects.....	10	2.9
Geology and forestry.....	6	1.7
Music.....	3	.9
Record incomplete ¹	13	3.7
Total.....	351	100.0

¹ This item includes four men who died and three who resigned early in their Oxford course.

Another table covering the classes from 1904 to 1914, inclusive, shows the degrees and diplomas secured by the scholars, as follows:

Degrees and diplomas secured by American Rhodes scholars, with classes where given.

Years.	Diploma.	B. Sc., B. Litt., B. Mus.	B. C. L.			B. A. honors, ¹					War B. A.	B.A. pass.	Du- pli- ca- tions.	Number of differ- ent men.
			First.	Sec- ond.	Third.	1	2	3	4	Not classed.				
1904.....	1	2	1	1	3	6	9	8	3	0	0	1	2	33
1905.....	0	5	0	1	3	3	9	6	1	0	0	0	0	28
1907.....	1	2	0	1	5	1	18	9	4	0	0	0	2	39
1908.....	3	5	0	1	2	2	19	11	0	1	0	1	6	39
1910.....	3	5	0	2	5	3	21	9	1	0	0	0	7	42
1911.....	4	0	1	3	1	7	8	15	7	0	0	1	8	39
1913.....	3	5	2	0	2	7	11	5	0	1	5	1	9	33
1914.....	0	4	0	0	0	4	15	2	1	1	12	1	3	37
Total.....	15	28	4	9	21	33	110	65	17	3	17	5	37	290

A large majority of the Rhodes scholars have taken the B. A. degree with honors. An insignificant number were content with the B. A. pass degree. This situation compares very favorably with the general practice at Oxford, where something less than one-fourth of the B. A. men take pass degrees. As to the proportion of honor men among the Rhodes scholars who take "firsts" and "seconds," the Americans are distinctly superior to the general run of Oxford men, as the following table shows.

	Firsts.	Seconds.	Thirds.	Fourths.
All men classed 1904-1914.....	13.1	36.3	50.3	13.4
American Rhodes scholars matriculating 1904-1911.....	14.7	48.9	28.8	7.6

On the other hand, it has been pointed out that the Rhodes scholars do not win so great a proportion of high honors as the men who hold the regular scholarships and exhibitions of the Oxford

colleges. For example, the proportion of scholars and exhibitioners in 1906, 1907, and 1914, respectively, who took "firsts" was 27.4 per cent, 30.8 per cent, and 21.2 per cent; "seconds," 44.1 per cent, 58.4 per cent, and 45.1 per cent. However, considering the special training which these students pursue in English preparatory schools in order to secure these scholarships, it seems as if the American Rhodes scholars compare as favorably with the regular Oxford scholars and exhibitioners as can reasonably be expected.

Answering the question as to what the Rhodes scholars have done upon their return to the United States, the study reveals that nearly one-half of them have pursued further graduate or professional study at American universities. Of these men, 84 have taken degrees as follows: Ph. D., 37; A. M., 12; degrees in law, 18; degrees in theology, 8; degrees in medicine, 9.

The following table shows the occupations of Rhodes scholars in 1920. The table includes the classes from 1904 to 1914.

Occupations of Rhodes scholars.

Education.....	114
Divided—	
College presidents, deans, etc.....	7
Other college teachers.....	84
Educational administration.....	7
Secondary school.....	11
Full time, law, theology, medicine.....	5
Law.....	72
Business.....	38
Social and religious work (including 12 ministers).....	23
Government service.....	15
Graduate or professional students.....	10
Scientific work.....	10
Literary and editorial.....	8
Medical work.....	7
Miscellaneous.....	4
Poor health.....	2
Total.....	303

As to the general effect of the Rhodes scholars on American life, Professor Burgess concludes his study as follows:

The expectation of Rhodes, or at least of some of the early writers on the subject was that the Rhodes scholars would enter politics in the English sense, or go into the diplomatic service. But neither of these lines affords a career in the United States for a man with his own way to make; the organization of the diplomatic service, rather than the scholars or the scholarship plan, is to blame for this imperfect fulfillment of early expectation.

But even while it is admitted that in politics and diplomacy the original intent of the plan has not been realized, and is not likely to be realized, one should realize fully the significance of the large proportion—over one-third—of the men engaged in

education, especially in college teaching. There is a closer relationship in the United States than in any other country between education and public life; we are, therefore, justified in saying that the Rhodes scholars in that occupation are in a position to exert as great an influence as they could in any other line—even in politics—and more than in the American diplomatic service. In view of the close relation between law and political life in this country some of the scholars engaged in the practice of law may be expected to become leaders in political life after their professional position is established. In their case, as for all the scholars, it should be remembered that the oldest Rhodes scholars are still young and that in American political and social life most of the leaders are selected from those who have demonstrated their worth in their own profession or business. From this point of view, the important thing is that the Rhodes scholars should be "making good" each in his own life. We may, therefore, hope that the inclusion of 17 men in "Who's Who" and the satisfactory academic standing of the college teachers among the Rhodes scholars are straws that show that the wind is blowing toward a satisfactory future, in which it will be a fact obvious to all that the Rhodes scholarships have accomplished something toward fostering Anglo-Saxon solidarity and assuring the peace of the world.

The following further statement concerning the Rhodes scholarships has been supplied by President Frank Aydelotte, secretary of the Rhodes Scholarship Trust:

Elections of Rhodes scholars are now being held under the new plan by which Rhodes scholars are chosen by committees composed mainly of ex-Rhodes scholars. In addition to this change in the organization of the committees the requirements have been modified in certain other respects: The qualifying examination in Latin and Greek, formerly required of all candidates, has been abandoned, and men are appointed on the basis of their academic record in school and college, supplemented by a personal interview with the committee of selection. The use of open testimonials has also been entirely abandoned. The candidates now merely refer committees to a few men from whom confidential information may be obtained about them.

The new method of appointment has resulted in a largely increased competition for the scholarships and consequent improvement in the quality of the men selected. The increasing competition seems due, in part at least, to the fact that the elections are in the hands of men who are qualified to give candidates information about Oxford and courses of study which they may profitably pursue there. The number of candidates for the three years in which the new plan has been in operation has been as follows: Four hundred and twenty-five in 1919 for 64 appointments in 48 States; 400 in 1920 for 64 appointments in 48 States; 507 in 1921 for 32 appointments in 32 States.

Double the usual number of appointments were made both in 1919 and 1920 by way of catching up for 1918 and 1919 when, because of the war, no Rhodes scholars were appointed from the United States.

Whereas before the war there were occasional States in which no candidates appeared, there has been a keen competition for the scholarships in every State in the Union since 1919. The new committees, however, have been granted discretion by the Rhodes trustees to refuse to appoint whenever in their opinion no one of the candidates before them has the qualifications which would make him a creditable Rhodes scholar. Vacancies so created have been thrown open by the trustees to candidates-at-large selected from competitors in larger States who did not in the first instance receive a scholarship.

Because of the increase in prices the Rhodes trustees have increased the stipend of £300 per year provided for each Rhodes scholar by a bonus of £50 a year, making the value of the scholarships at present £350 per annum.

FOREIGN STUDENTS IN THE UNITED STATES.

In October, 1921, the Institute of International Education secured information showing that at that time there were 6,488 foreign students and students from American possessions in 345 of the 554 higher institutions which answered the questionnaire which was distributed. Of this number 761 were women. Seven hundred and fifty-three were reported as taking graduate work. The distribution of students by subjects was as follows: Agriculture, 337; liberal arts, 1,918; architecture, 56; chemistry, 168; commerce, 445; dentistry, 245; economics, 41; education, 186; engineering, 1,179; forestry, 15; geology, 8; journalism, 17; law, 117; library methods, 9; medicine, 337; pharmacy, 48; theology, 218; unclassified, 1,114.

A similar study made by the Bureau of Education for the year 1920-21 shows that the total number of foreign students of college grade in American colleges and universities, not including independent theological schools, was 6,901; students from American possessions, 1,456; total, 8,357. These students were distributed as follows among the more important sources: China, 1,443; Canada, 1,294; Philippine Islands, 857; Japan, 525; West Indies, not including Porto Rico, 396; Porto Rico, 302; Russia, 291; Mexico, 282; India, 235; Hawaii, 208; South America, 563; South Africa, 141.

CHAPTER IV.

SIGNIFICANT MOVEMENTS IN CITY SCHOOL SYSTEMS.

By W. S. DEFFENBAUGH,

Chief of City School Division.

CONTENTS.—Administration—Research bureaus—Teachers' salaries, qualifications, councils—School buildings—Platoon, or work-study-play school—Tests—Special classes—Unification of program of studies.

In a brief chapter treating of the progress and status of education in the cities of the country it is impossible to treat of all the phases of modern city school systems with their regular day schools, night schools, continuation schools, special schools, clinics, etc. Some of these phases are discussed in other chapters of the Biennial Survey of Education, and those topics are merely mentioned or entirely omitted in this chapter.

ADMINISTRATION.

Although the majority of the city school systems of the country are independent of the control of the city officials, and although the best authorities on school administration advocate boards of education fiscally independent of the mayor, council, or commission, the question of who shall appropriate the school funds, and even of who shall control their expenditure, seems to be a perennial one in several cities of the country. In Buffalo, N. Y., for instance, an attempt was made by the common council of that city to reduce the salary of the superintendent of the city schools from \$10,000 a year, which had been fixed by the board of education, to \$7,000 a year. The question was settled by the court, which held that the board of education had exclusive power to fix the salaries of its employees under the teachers' salary law, and ordered that the superintendent's salary be restored.

If the court had ruled that the city authorities of Buffalo could reduce salaries at will, the schools would in effect no longer be under the control of the board of education but would be under the control of the city council.

The opinion reads in part:

It was never the intention of the legislature that after the salaries of school superintendents and teachers had been fixed by the board of education, which

was authorized by law to fix salaries and which body was supposedly competent to act in that regard, its action could be rendered of no effect by the capricious act of a commissioner of finance and accounts or comptroller of a city or the common council. If such were the case, it is quite conceivable that a situation might arise where a board of education might absolutely cease to function because of its inability to fix salaries attractive to competent teachers. In this case if the defendant could thus cut down the salary of the superintendent of schools which had been fixed by the body authorized by law to do so, he would practically have it in his power to control the entire salary list of the employees of the department of education in the city, and that certainly was never intended.

Another recent court decision regarding the control of school funds was that made by the Supreme Court of Massachusetts, which ruled that the school committees of that State are independent in fixing salaries of teachers and that they are not limited by appropriations made by the city councils and towns.

The question arose in the case of the mayor of Springfield and other taxpayers, who asked that the school committee be restrained from diverting money for purposes other than those specified in the appropriations made by the city council. The City Council of Springfield, in making up its budget for the year 1921, reduced the appropriation asked for by the school committee. To provide for increase in teachers' salaries the school committee eliminated the summer schools and discontinued 11 kindergartens, and curtailed expenses in other schools constituting distinct headings or items in the budget. The results of the several votes of the school committee were not to exceed the total appropriation for schools but to change the application of some of the items in the budget.

The precise question, therefore, to be decided was whether the school committee had power thus to carry out its policy as to the management of the school system or whether it was bound by the action of the mayor and city council to the items set forth in the budget, without power to modify or change them in any substantial particular.

The court decision, in part, reads:

The school committee is an independent body, intrusted by law with broad powers, important duties, and large discretion. The obligation to select and contract with teachers implies examination as to their fitness, and of necessity carries with it the authority to fix the compensation to be paid. It would be vain to impose upon the school committee responsibility for excellence of the instruction to be afforded to pupils and to deprive them of the power to determine the salaries of teachers. There is much of self-sacrifice and devotion to the common welfare among teachers in the public schools. But, nevertheless, the character of service to be obtained depends to a considerable degree upon the compensation offered. The full and appropriate discharge of their duties by school committees requires ample power to select competent teachers. The legislature, moved by obvious and strong reasons, has vested the school committee with the absolute and unconditional power to agree with teachers upon

their salaries to the end that high standards may be secured and maintained in the education of the youth of the Commonwealth. In the exercise of their honest judgment on the question of salaries for teachers, the school committee are not restricted to the amounts appropriated. For the time during which schools must be kept by law the municipalities must pay such salaries as may be fixed by the school committee. To take this power from the school committee would break up the long-established system of our law in regard to public schools. The only supervision which the city council or towns can exercise over the school committee is to vote to close the schools after they have been kept the length of time specified by the law. The school committee may make all reasonable rules and regulations for the government, discipline, and management of the schools under their charge. This includes a determination, within the bounds set by the statutes, of the subjects to be taught and the nature of the schools to be maintained, and the exercise of discrimination, insight, and wisdom in the election of teachers and in the general supervision of the school system, with all the incidental powers essential to the discharge of their main functions.

The control of school funds has been the subject of discussion in several cities of New Jersey. According to a decision of the State commissioner of education, school boards are not municipal governing bodies and have power to select sites for city schools. The question arose from the fact that that right was disputed by the city commissioners of Long Branch. The commissioner of education also decided that it is mandatory on the part of city officials to raise the appropriation asked, provided the amount is below the 3 per cent allowed by law, once the board of school estimate has decided upon the appropriation required.

The latter point simply reiterated a court decision already had to the effect that when the board of school estimate has fixed and determined the amount necessary for the purchase of land and the erection of a schoolhouse, it is mandatory upon the body having power to make appropriations of money raised by tax to secure the amount to be raised by tax or to borrow the same and secure its repayment by the issue of bonds.

Dual control of schools is being assailed in practically every city where such control obtains. One member of the New York State board of regents says regarding the attempt of the city council at Buffalo to reduce a salary fixed by the board of education:

The people of this city and of every other city who have had experience with political control of the schools, and who have been endeavoring to remove the schools from the political control for a quarter of a century, have no mind practically to dismiss their school boards by making them mere puppets of political powers in the city, so that they can be removed without cause whenever a change in the political majority or too much independence in the school boards shall make it impossible for the municipal authorities to dominate the schools and virtually appoint or dismiss superintendents and trustees as they will.

The regent also refers to conditions in New York City, where the question of dual control has been discussed pro and con for many years. He says:

In New York we know that dual control and red tape have delayed the building of schoolhouses officially determined to be necessary, again and again, for years and years; under different administrations, so that to-day, in spite of the large amount expended upon public schools during the past few years, thousands, tens of thousands, and even hundreds of thousands of children are compelled to attend school at inconvenient hours, or for part time, and are denied those full school opportunities that ought to be the inalienable right of every boy and girl of school age.

That city school systems which are fiscally independent generally have better schools than those that are fiscally dependent has long been the opinion of school men and most others who have studied problems of city school administration. In a study¹ made by Prof. George W. Frasier, dean of the Colorado Teachers' College, he arrived at some definite conclusion on this point by measuring the efficiency of each of 169 city school systems by means of an index number made up of the following factors:

1. The per cent of 16 and 17 year old children.
2. The per cent of elementary classes having fewer than 40 children enrolled.
3. The per cent of children who have 60, or more, square feet of playground space.
4. The per cent of teachers who have six or more years' training above the eighth grade.
5. The per cent of children enrolled who attend all day, and in adequate buildings owned by the school district.
6. The per cent of the increased cost of living from 1913-14 to 1919-20 that was met by increased salaries for elementary women teachers.

After the six percentages were computed for each city, these values were expressed in terms of the standard deviation of the distribution. All comparisons were made on the basis of the sum of the standard deviation values of each city. When the independent city school systems were grouped in one group and the dependent ones in another and comparisons were made, it was found that the independent cities had a higher average rating than the dependent ones. This conclusion was verified by all comparisons made between the two groups: Professor Frasier concludes that there seems to be no doubt but that school districts that are fiscally independent have better schools than those that are fiscally dependent. The reasons he assigns as to why city school systems should be fiscally independent are:

1. Fiscal independence is right in principle.
2. Fiscal independence is not a violation of the correct principle of taxation.
3. Fiscal independence works better in practice.
4. Fiscal independence

¹Amer. Sch. Bd. Jour., December, 1922. Also "The Control of City School Finances," published by the Bruce Publishing Co., Milwaukee, Wis.

makes for a continuity of educational policy. 5. Fiscal independence provides adequate financial safeguard for a community. 6. Fiscal independence tends to keep politics out of the schools.

RESEARCH BUREAUS.

So complex have city school systems become, especially those of the large and medium sized cities, that the superintendents of schools in such cities can not themselves collect and compile the data needed for their own and the school board's guidance. As a consequence, many boards of education in the large, and some in the small, cities have organized departments or bureaus of educational research to collect and compile data regarding practically every phase of their respective school systems.

Most of the city school research bureaus have been organized within the past three or four years. Ten years ago there were none. To-day 80 city school systems report that they have research departments, and no doubt there are others that have not reported. Every progressive school superintendent, even if he has no regularly organized research department, is attacking his problems in a scientific manner by having the supervisors, principals, and teachers prepare data for his guidance. He is in some way securing the necessary information. But the most economical way is through an organized research bureau.

It is generally reported that research bureaus have brought about a greater efficiency in the management of the schools. However, the board of education that organizes a research bureau with the expectation of helping to reduce the tax rate will no doubt be disappointed. It will find leaks here and there, but, on the other hand, it will find that some phases of the school work are inefficient because of insufficient support. Efficiency in the management of a school system, as in the management of a private corporation, does not mean niggardly expenditure. Efficiency means making the best use of the funds appropriated. Increased efficiency often means that larger appropriations should be made. In a manufacturing plant it sometimes means the scrapping of old machinery and the installation of new at great expense. The school world and the public have been slow to realize the fact that efficiency consists in getting the most out of every dollar available. Possibly if the school men of the country had attacked their problems in a more businesslike way by checking up every expenditure in order to see definitely whether it was too much for the results or so little that there could be no results, the public, especially that part of the public accustomed to dealing with things in a businesslike way, would be more willing than it now is to vote for increased expenditures.

The scope of the work of several research bureaus is contained in City School Leaflet No. 5, 1922, published by the Bureau of Education. The scope of the work of two of the more recently organized bureaus may, however, be given here as examples—that of Akron, Ohio, and that of Chicago, Ill.

The research bureau at Akron, organized in 1920, has as its object:

(1) To keep up a continuous survey of elementary school work through the use of standardized educational tests; (2) to train teachers in the use of educational tests; (3) to help improve instruction; (4) to experiment in classification; (5) to handle all mental testing; (6) to form special classes under direction of a psychologist; (7) to make age-grade studies; (8) to develop course of study for the elementary grades.

The scope of the work is further explained by the nature of the studies that it has made, which were:

In 1921-22.—Survey in arithmetic each semester; program in arithmetic each semester; relative effect of experimental methods on reading compared with regular methods; relative effect of Courtis and Studebaker practice material compared with regular methods; correlation between success in 9B work and score made in national intelligence examination, grade A; classification based on results of intelligence examinations and work on school subjects in one large elementary school; age-grade studies.

In 1920-21.—A survey of schools in reading, arithmetic, spelling, and penmanship; measured progress made during year in reading and arithmetic; measured relative effectiveness of Courtis and Studebaker practice material on arithmetic as compared with usual methods of drill.

The Chicago school research bureau, organized in 1920, makes measurements to help solve certain problems which are general to the school system. Assistance is given to principals of individual schools in the use of tests for a solution of their problems. Tests in certain subjects have been used throughout the city in order to discover weak places and suggest more adequate methods of instruction. Intelligence and achievement tests are used to study the effect of an increased amount of industrial work in the last three grades of the elementary school. A number of the elementary schools which are organized on this basis give from one-fourth to one-fifth of the time of these three upper grades to industrial work.

In a number of schools, a study of the relation of achievement to failures in the various school subjects has been made. This use of the test has proved very valuable to the school studies. Wherever measurements are used, the attempt is made to make the results useful to the school system.

In 1920 a series of experiments on the following problems was begun, in cooperation with the University of Illinois: (1) The effect the size of the class has on the achievement of pupils; (2) the effect of the grouping of pupils according to ability on their achievement.

TEACHERS' SALARIES.

Since 1918 the attention of city school boards has been turned as never before toward the problem of securing and retaining an efficient corps of teachers. Shortly after the beginning of the World War the teaching staff in every city began to dwindle away by the resignation of many teachers whose places had to be filled with others usually less well qualified. Some cities resorted to bonuses, but even these were insufficient. About 1918 many cities began to increase salaries, but still the ranks were not filled, but by 1922 the salaries of city school-teachers had been increased until they equaled or surpassed to a slight degree the purchasing power of the 1913 salaries. The National Education Association arrives at the following conclusion regarding teachers' salaries and their purchasing power:²

1. Teachers' salaries throughout the war had less purchasing power than they did at the beginning of the war, whereas wages in general had greater purchasing power than they did at the beginning of the war.
2. Teachers' salary increases lagged far behind the rise in the cost of living and have only just recently returned to their pre-war purchasing value.
3. There is yet an insufficient decline in the cost of living to justify any reduction in teachers' salaries on this basis.
4. Additional increases in salaries of teachers must be granted, if there is to be any substantial increase in the purchasing power of the teachers' wages and if there is to be any compensation to teachers for their cheerful acceptance throughout the war of a salary greatly depreciated in purchasing power.

Salaries were increased from 1918 to 1921, but for the year 1922-23 very few cities have made any great increases. In some instances there were slight reductions. On the whole, the salaries paid in 1921-22 are holding. It is doubtful whether any further increases may be expected for several years, since strenuous efforts are being made in many cities to reduce expenses and in the others not to increase expenses. It is the general opinion of school men that, if well-qualified teachers are to be retained and if high-school graduates are to be induced to prepare for teaching, there should be no cuts in salaries but, rather, that there should be increases.

Naturally, boards of education, superintendents, and teachers have given considerable attention to salary schedules during the period of salary increases. The newer salary schedules may be classified as: (1) The automatic type—i. e., a teacher advances in salary

² Facts on the Cost of Public Education.

according to length of service, or to grade taught, irrespective of professional preparation or of merit; (2) the single-schedule type, based upon professional training and length of service. Many cities still retain the first type of schedule, which is built upon automatic increases, covering periods ranging from 5 to 10 or 12 years, merit and added professional training receiving but little or no recognition.

The schedules of Cleveland and Denver may be given as examples of those based upon professional training. The Cleveland schedule is based upon professional training, but still maintains the gradation of the old type. The principal features of the Cleveland schedule are:

1. An automatic schedule based upon minimum requirements, allowing certain regular annual increases for experience.
2. Additional allowances beyond the regular schedule for further professional training.
3. Automatic allowances or steps within each advanced group.

The Denver schedule is distinctly a single-salary schedule; all teachers with equivalent training and experience are paid the same salary, whether they teach in elementary, intermediate, or high school. The requirements provide for five degrees of standards of training, ranging from normal training to holders of a master's degree, with provision for teachers now employed who have less than standard requirements.

A schedule recently suggested for the Detroit schools attempts to give a proper consideration for both professional training and merit. This schedule is based upon three factors: (1) Professional preparation; (2) successful experience; (3) rewards for meritorious service.

The salary schedule recently adopted by the school board of Fort Smith, Ark., may be given as an example of a single-salary schedule in operation in one of the smaller cities. This schedule provides for a classification of teachers on the basis of academic and professional training, as follows:

Class 1. Master's degree (or equivalent) from an approved institution.

Class 2. Bachelor's degree (or equivalent) from an approved institution.

Class 3. Normal diploma (or equivalent) from an approved institution.

Class 4. Less preparation than class 3.

Each teacher is assigned to a classification at the time of employment. The schedule for each class applies thereafter until the maximum is reached, subject to the following reservations: A teacher may advance from one class to another by reason of additional approved preparation. Credit for additional preparation will be recognized

only in multiples of one-fourth of one year's college work (usually not less than seven and one-half semester hours).

The provisions of the schedule apply to all grades: teachers with equivalent training and experience may receive equal salaries whether they teach in the secondary schools or in the elementary schools.

Among the cities that have adopted some form of single-salary schedule are Birmingham, Ala.; Fort Smith, Ark.; Denver and Pueblo, Colo.; Chicago, Park Ridge, and Streator, Ill.; Des Moines and Sioux City, Iowa; Fort Smith and Lawrence, Kans.; Adrian and Grand Rapids, Mich.; Duluth, Virginia, St. Cloud, and Rochester, Minn.; St. Joseph and Kansas City, Mo.; Hastings, Lincoln, and Omaha, Nebr.; Raleigh and Washington, N. C.; Cleveland, Cleveland Heights, and Oberlin, Ohio; Muskogee, Okla.; Harrisburg, Pa.; Roanoke, Va.; Spokane, Wash.; Green Bay, Wis.

* The tendency is undoubtedly toward a salary schedule that recognizes professional preparation and provides for equal pay for equivalent preparation and experience. Merit also is being considered, but it is doubtful whether many of the schedules providing for the recognition of merit have always been successfully administered, from the fact that merit in a teacher is so difficult to measure. The teacher who is graded low compares herself with some other teacher more fortunate and then concludes that she has been unfairly and unjustly marked. In not a few places the dissension in the teaching corps in consequence of alleged unfairness in evaluating the efficiency of teachers has outweighed the benefits. Indeed, it is the fear of engendering such discord that has deterred many school boards from adopting a plan to recognize individual merit in terms of the salary schedule.

The merit system of promotion has, however, been in successful operation in many cities. The superintendent of schools, Boston, Mass., says, regarding the plan of appointing and promoting teachers on merit in that city:³

The establishment of merit lists for original appointments and for promotion of teachers within the service is one of the most notable achievements in recent school administration. These lists are constructed on certain objective and measureable bases, which are general in their character and which in so far as possible apply to all candidates alike. These bases include general education, professional improvement and growth, personal characteristics, quantitative and qualitative experience in teaching, etc. They are made in a purely impersonal manner, in absolute good faith, with extreme care, and by the best judicial intelligence that a school system can marshal. These lists are made in conformity with civil-service practices, the utmost publicity is furnished all candidates concerning the method of rating and the results thereof, and the body creating the list stands ready to correct any error of judgment or to remedy any injustice.

³ School Document No. 12, 1922, Boston Public Schools.

Whatever imperfections may appear, as the plans and procedure of rating are developed, the operation of the system unmistakably facilitates the administration of the schools and tends to create confidence throughout the service. All external interference, political or otherwise, is reduced to a minimum, and in the long run capable and progressive men and women are more likely to receive just professional deserts than under any plan of appointment and promotion where the superintendent of schools is the sole judge of proficiency. Moreover, the merit system tends to eliminate discrimination against a candidate because of race, or creed, or politics. It is consistent with our democratic, social, and political organization. An elaborate merit system may be impracticable in smaller communities, but in the larger towns and cities school authorities in the future will find great difficulty in justifying appointments and promotions upon any other basis.

An example of a salary schedule based upon merit alone is that of Newton, Mass. Mr. U. G. Wheeler, superintendent of the Newton schools, says regarding the teachers' salary schedule of that city: ⁴

The Newton plan of grading salaries, inaugurated some years ago by Doctor Spaulding, is founded on the double and apparently self-evident proposition that there is a considerable variation in the worth of different teachers, and that a teacher should be paid exactly what her services are worth. Said Doctor Spaulding, "The only practically applicable measure of any teacher's worth is the cost of such service as she renders. How much will it cost to fill the teacher's place? For how much can we secure a teacher as good, should the place become vacant? Length of service is not merit. Faithfulness, conscientiousness, loyalty, and hard work are most commendable characteristics; but, alone, these characteristics can not be made the basis of an increase in salary, for we demand all these qualities, and many more like them, of every teacher whom we employ at any salary."

Upon this creed was founded the much discussed "merit system" of Newton. Briefly, it was as follows:

It had but one constant factor, and that was a so-called "regular" salary. This was fixed at a figure about equal to the salary necessary at that time to secure and retain a teacher of such recognized ability that she would unquestionably be placed on the permanent list. All teachers then in service who had been in the system three years or more were given or promised this regular salary, and no teacher was continued beyond the three-year limit who, in the judgment of principals, supervisors, and superintendent, was not worth this stated amount. Beyond this "regular" salary all teachers might hope to advance. No stated annual increment was promised, and no final maximum was fixed. Every advance was granted strictly on merit, and varied in amount according to the degree of efficiency the teacher was judged to possess. It is obvious that in time there resulted considerable variation in the higher salaries paid, and many teachers of long experience were not advanced beyond the regular, fixed salary. New teachers were given an initial salary according to experience and estimated worth but never in excess of the so-called "regular" salary. Their advance to the regular salary, or beyond, was reasonably certain, for otherwise their places would be filled by more promising teachers.

There is only one constant factor in the scheme—the so-called "regular" salary. Suppose we place this at \$1,600. All teachers in the system are im-

⁴ School Life, Mar. 15, 1921, p. 16.

mediately given or promised this amount. New teachers begin at from \$1,200 to \$1,600, according to training, experience, and estimated worth, and none are permanently retained who, in three years' time, are not rated as \$1,600 teachers. All may aspire to an unnamed and unknown amount beyond the \$1,600, the rate of increase and ultimate salary in each case depending solely upon merit as judged by administrative and supervisory officers.

To avoid as far as possible the danger of unfairness and to provide against errors of judgment, most superintendents making merit one of the factors in the promotion of teachers use a form for scoring the efficiency of each teacher. In many instances the teacher is graded by two or more persons independently, and the teacher is informed of her ranking before her salary for the year is fixed. The following scheme of rating teachers is in use in many of the schools using some form of rating card:

Qualities rated.	Very poor.	Poor.	Medium.	Good.	Excellent.
I. Personal equipment:					
General appearance.....					
Health.....					
Voice.....					
Quickness of perception.....					
Initiative.....					
Adaptability, resourcefulness.....					
Accuracy.....					
Industry.....					
Enthusiasm and optimism.....					
Integrity and sincerity.....					
Self-control.....					
Promptness.....					
Tact.....					
Sense of justice.....					
II. Social and professional equipment:					
Grasp of subject matter.....					
Understanding of children.....					
Interest in school work.....					
Interest in parents.....					
Interest in lives of pupils.....					
Cooperation and loyalty.....					
Professional interest and growth.....					
Daily preparation.....					
Use of English.....					
Standing in community.....					
III. School management:					
Care of light, heat, and ventilation.....					
Neatness of room.....					
Discipline.....					
IV. Technique of teaching:					
Clearness of aim.....					
Skill in habit formation.....					
Skill in stimulating thought.....					
Skill in teaching how to study.....					
Skill in questioning.....					
Skill in care and assignment.....					
Skill in arousing interest.....					
Skill in getting pupils to work.....					
Ability to follow directions.....					
V. Results:					
Habit of attention of class.....					
Habit of willing obedience.....					
Growth of pupils in knowledge.....					
Moral influence.....					
Growth in habits of cleanliness.....					
Growth in habits of industry.....					

Most of the rating schemes attempt to formulate a basis for judging certain characteristics of the teacher. A teacher may have many of the characteristics called for on the score card, as health,

good voice, self-control, honesty, etc., and not be a good teacher. There should therefore be some attempt to rate teachers on results. The following is suggested:⁵

- I. *Pupil achievement.* Minimum 50, maximum 75.
 1. Objectively measured (for each subject).
 - a. Knowledge.
 - b. Skill.
 2. Other achievements.
 - a. Habits of study.
 - b. Attitude toward—
 - Work.
 - School government.
 - School organization.
 - Moral questions.
 - Life preparation.
 - II. *Merit in mechanics of worker.* Minimum 20, maximum 40.
 1. Organization and administration of—
 - a. Tools.
 - b. Raw material.
 2. Skill in technical method.
 - III. *Merit as a social worker.* Minimum 20, maximum 40.
 1. Cooperation with organization.
 2. Professional habits.
 3. Success in dealing with parents.
 4. Sympathetic interpretation of pupils.
 5. Discharge of obligations as community member.
- In the administration of any such plan for rating the following would need to be taken for granted:
1. The knowledge of the potential ability of pupils to achieve, measured in terms of their intelligence.
 2. A statement of pupil achievement at the beginning of any period over which the efficiency of a teacher's work is to be judged.
 3. The working out of intelligible standards in the items to be listed under "other achievements."
 4. Specific statement by the supervisor or in the course of study, or both, of the tools and methods to be used and how to use them.

The plan of granting credit for attendance at summer school has been adopted by many school boards as a means of encouraging professional improvement. A bonus is sometimes granted for this activity, usually about \$2.50 to \$6 per month, which is added to the salary the year following the course, or a cash bonus of \$25 to \$60, and in a few instances \$100. In some cases an advance upon the salary schedule is granted in addition to the normal advance.

The problem of providing an equitable basis for the promotion of teachers has its counterpart in providing a just way of removing teachers from the service for various causes. That injustice is sometimes done a teacher by the hasty action of a superintendent can not be denied, but, on the other hand, incompetent teachers are often

⁵ Raymond Kent. *Jour. Educ. Research*, Dec., 1920, p. 806.

retained in service because of the difficulty of removing them. When teachers are appointed for a term of only one year, it is easy to drop the inefficient teacher, but in school systems where teachers are placed on tenure it is often a difficult matter to dismiss a teacher.

A committee of the National Education Association, appointed to make a study of teachers' tenure, has the following to say regarding the removal of teachers:

During the probationary period there is little question but that the removing power of the board should be strongly preserved. In order that the teaching staff itself may be protected from the danger of weak and incompetent teachers on permanent tenure, it is necessary that high standards of entrance requirements be required. It should not only be the duty of the superintendent and supervisors to study the attitudes and abilities of the probationary teachers with great care and exactitude, but the teachers already on tenure should indorse and encourage the continued maintenance of those professional requisites which protect them from being weakened through the accumulation of an incompetent and undesirable element which brings discredit to the profession and which has interfered with the progress of protective measures for the benefit of a large majority of successful teachers already in the service.

The board of education, therefore, should have the right, upon recommendation of the superintendent, to drop any probationary teacher at the end of the school year after a reasonable notice. The notice should not be less than 30 days. The Portland (Oreg.) law provides that a probationary teacher shall not be dismissed simply on account of friction between her and the principal without giving such teacher a fair opportunity with another principal. The teacher might be dropped at any time after a reasonable notice, a notice of not less than 60 days. A written statement signed by the superintendent should be given the teacher, stating the reasons for her dismissal. If the deficiency be due to a lack of skill in classroom management, removal should not be made until the teacher has been warned and an opportunity given to correct the same.

After the probationary period teachers should be removed only for cause. The causes enumerated include one or more of the following: Inefficiency, neglect of duty, professional stagnation, indifference and lack of growth, lack of cooperation, disloyalty, immorality, unprofessional conduct, insubordination, ill health and physical disability, or any other reason that would annul a teacher's certificate. The New York law specifies that the teacher shall hold her position "during good behavior and efficient and competent service." The proposed Ohio law gave neglect of duty, insubordination, conduct unbecoming a teacher, and immoral or criminal conduct as causes for removal. The Pawtucket (R. I.) regulations specify only misconduct or incapacity. The Massachusetts law lists no specific reason.

Teachers may be dismissed at any time for the causes enumerated above. In all cases written notices of charges are necessary, and the teacher is given an opportunity of a hearing to refute the charges. Pending the hearing the teacher may be suspended, and this suspension is without pay if the charge is sustained. Usually the board of education has the final decision in these matters. New York, New Jersey, and California, however, provide for an appeal to the State superintendent or other authority. Portland, Oreg., provides for appeal by the unique method of a trial board of three appointed by the presiding judge of the circuit court. In all cases where the decision to remove is supported by less than five of the seven members of the board of

education an appeal may be taken by the teacher to the commission. The decision of this special commission is final and conclusive. If five of the members of the board vote for removal no appeal from this decision can be made. A majority of the board can remove.

The questionnaire sent to affiliated units of the National Education Association indicates that the majority of the teaching organization believe that the hearing should be held before the board of education. Quite a number favor the first hearing before the superintendent and supervisory officials. This group usually believes in an appeal to the local board of education. Those favoring the initial trial before the board or superintendent and board would provide for an appeal to the State superintendent of education for his department. A number of suggestions were made that the trial be held before a joint committee consisting of representatives of the board, the teaching body, and citizens. Another recommendation that a committee of three be substituted consisting of one representing the board or superintendent, another the teacher, and a third to be selected by these two.

Since the board of education is the agency which employs the teacher, it would seem that they should also be the removing agency. The right to employ implies the right to dismiss. The privilege of reviewing the action of the board in dismissing a teacher is a fundamental principle of American democratic justice and a reasonable protection that should be provided. Since the majority of dismissals are based on technical questions, such as neglect of duty, incompetency, inefficiency, conduct unbecoming a teacher, and the like, it seems that the final body of appeal should be in educational work and yet disinterested. Dr. Kandel, of the Carnegie Foundation for the Advancement of Teaching, states that "the best practice to-day provides for an appeal to the State superintendent of public instruction."

The question of whether the hearings should be public or private is a debatable one, and the committee would request an opportunity to give this more study. The general practice is to have the hearings private, although there seems to be developing a strong tendency to make the matter of privacy optional with the teachers. There are undoubtedly occasions when the nature of the accusations might demand a private hearing in order to protect the teachers, the school system, and the children of the community themselves.

On the other hand, publicity serves as a competent check upon hasty and ill-advised action. It may prove a restraint upon judicious and justifiable dismissals, however, and consequently may work to the detriment of the school organization.

It is a striking fact that the majority of those answering the questionnaire sent to the affiliated organizations of the National Education Association indicated a preference for private hearings. Quite a group, it will be noted, also felt that this privilege should be left to the discretion of the teacher accused, and the hearings be public or private as she requests. It seems that the accusing body should have some right of determination in this matter also, since the advisability of presenting evidence might hinge on the kind of hearing granted. If the first hearing were private and the right of appeal allowed, which would be public or private as the teacher requested, perhaps all rights would be safeguarded.

QUALIFICATIONS.

During the period from 1917 to 1921 the city school systems of the country suffered from a lack of trained and experienced teachers. Nearly everywhere there was a lowering of standards, but within

the past year there is every indication that the standards are being raised in those cities where the standards had been uniformly low. Memphis, Tenn., for example, has adopted new and higher standards for teachers' requirements by requiring teachers beginning service in the Memphis school system to have credits for at least two years of normal school or college work in addition to a high-school education. Those already employed who are without this training are exempted from the rule.

Wheeling, W. Va., may be given as another example of a city that has raised the standards. In 1921 when a survey was made of the schools of that city the educational and professional qualifications required for beginning service in both the elementary and high school were very low. Immediately upon the report of the survey commission the board of education adopted the following resolutions regarding the preparation of teachers:

That after July 1, 1921, no new teacher or supervisor shall be employed for service in the high schools who is not a graduate of an accredited four-year college or university course, except that teachers or supervisors in special technical subjects may offer successful experience in the vocations related to such subjects in lieu of two years of such college or university course, provided two years of approved professional training beyond high-school graduation be offered.

That after July 1, 1921, no new teacher or supervisor shall be employed for service in the elementary schools who is not a graduate of an approved normal school or teachers' college course consisting of two years' work beyond graduation from a standard high school, or, in the case of special trade subjects, who has not had the equivalent of two years of professional preparation for teaching or supervising the subject in question.

That after July 1, 1921, to be eligible for a new appointment as principal of a school a candidate should meet the minimum requirements herein set forth, and in addition should have had not less than five years' successful experience in teaching and have completed an approved course of professional preparation in school administration and supervision.

That in the cases of all principals, teachers, and supervisors who were employed in the Wheeling public schools during the year ended June, 1921, and reappointed for the ensuing year, the application of the minimum requirements as herein set forth be waived until September 1, 1927; and that the superintendent be directed to report on the professional qualifications of all principals, teachers, and supervisors at the regular meeting of the board in September of each year.

That after July 1, 1925, no person shall be employed for substitute service who does not meet with the minimum qualifications of regular teachers as set forth in this resolution.

COUNCILS.

One of the outstanding movements of the past few years is the organization of teachers' councils, which are generally constituted for some or all of the following purposes: (1) To raise the standard

of the teaching profession; (2) to encourage professional improvement; (3) to foster a spirit of sympathetic good will and helpfulness among teachers and a better understanding between teachers and officials; and (4) to democratize the school system; that is, to give teachers a voice in the shaping of educational policies.

If teachers' councils do nothing more than to bring about a friendly cooperative relation between school boards and teachers, they are worthy of encouragement. In too many instances there has been this lack of cooperation, from the fact that the teachers have been considered as mere cogs in a great machine. This has been especially true in the larger cities where school machinery is complicated and where there is no contact between the teaching staff and administrative authorities. In the nature of things only a few teachers can be acquainted with the members of the school board and with the superintendent, and these are not always representative of the teaching body. Certainly they are not so considered by the teachers unless they were chosen by the teachers to represent them. If a superintendent or a school board consults a few teachers selected at random, difficulties are apt to arise, and the whole administrative machinery may get out of gear. It is difficult for the school board to know what teachers to consult. The only democratic way is to consult them all. Some superintendents and school boards have realized that the intelligence of the whole teaching body should be capitalized and that it is unwise to consult only a few teachers. They have, therefore, encouraged the organization of teachers' councils. In some instances such councils have been organized only after considerable parleying with school officials. Much better results could be expected if the teachers were invited to offer their opinions upon matters that vitally concern the schools.

To autocratic boards and superintendents the claim of teachers to be heard in board meetings seems radical. What right, it is asked, have teachers to ask to be consulted? The school board is responsible to the people, not to the teachers, and therefore must formulate all policies. It is replied that no right is taken away from the board, for its province is to legislate, and it should do so with all the light available. No right of the superintendent is abrogated, for he, too, should make his recommendations only upon the fullest information possible.

If a teachers' council attempts to usurp the prerogatives of a board or of a superintendent, it has no excuse for existing. It is generally recognized that the function of a council should be: To secure active and effective direction of the schools by affording the largest opportunities for initiative on the part of teachers in the formulation of courses of study and in the selection of textbooks;

to encourage professional interests and to furnish a ready and effective means for the expression of sentiments and opinions with reference to questions of school policy.

Superintendents and boards that have recognized teachers' councils report generally that the conferences of the members of the council and administrative officials bring great help to the latter. One superintendent says that the educational council has been of more help to him than to the teachers, that it keeps him in touch with them, and that he is thus able to know their opinions upon various matters. In other words, this superintendent is given a broader view of school affairs by those who are closest to the children. A teacher of children knows the weak points of the course of study; she knows whether the textbooks in use are well adapted to the children in her grade. Granting that the opinion of a single teacher might not be worth much, the combined opinions of the entire teaching corps are certainly worthy of consideration.

Whatever course teachers' councils may take, it should be remembered that the school board and the superintendent are the final authorities representing the public and that teachers legally have no legislative functions. Wise school boards and superintendents should, however, utilize the first-hand knowledge that teachers have of school conditions.

School superintendents generally state that the work of teachers' councils has been beneficial. Among the specific achievements the following are reported: (1) Aided in securing a retirement law; (2) conducted successful campaign for school bonds; (3) formed loan fund for teachers; (4) procured general increase in salaries; (5) worked out a new course of study; (6) unified teachers by social gatherings; (7) held meetings for professional advancement; (8) conducted lecture courses; (9) secured use of school buildings for community purposes; (10) established cooperation between schools and private music teachers; (11) brought about better working conditions for teachers; (12) provided rest rooms for teachers; (13) organized parent-teacher associations; (14) equipped playgrounds.

SCHOOL BUILDINGS.

One of the biggest problems confronting boards of education is how to provide enough school buildings to relieve congestion and to replace the many old buildings unsuitable for use both from a sanitary and an educational viewpoint. At the beginning of the World War nearly every city needed more school buildings. At the close of the war the situation had become deplorable, since no buildings had been erected during the war period.

An idea of the school-building situation was forcibly set forth in 1921 by the national committee for chamber of commerce coöperation with the public schools in a bulletin, "Know and Help Your Schools." It was found by the committee that 298 out of 950 cities of 8,000 or more population were using over 3,000 portable school buildings, in which were housed more than 121,000 pupils; that 43,000 pupils were housed in rented dwellings, lofts, stores, etc., 55,000 in annexes, 8,000 in halls and corridors, 3,000 in attics, and 31,000 in basement rooms. After making a deduction of the number of pupils in annexes, there were still more than 215,000 school children in these 298 cities housed in makeshift rooms. The committee also found that in 151 of 429 cities reporting there were more than 248,000 children on half-time because of the lack of schoolroom space. In all, there were more than 463,000 children who were either on half-time or housed in makeshift buildings.

To provide proper school accommodations for this army of children it would require 11,575 classrooms, counting 40 pupils to a class, or 724 school buildings of 16 rooms each, which would require an expenditure of \$138,900,000 at a cost of \$12,000 a classroom. It must be remembered that this estimate is for less than one-third of the cities of 8,000 or more population.

The report of the committee also shows that the majority of the elementary-school buildings were erected many years ago, the median elementary-school building being 24 years old. It is thus evident that many of the school buildings are antique and a hazard to the life and a menace to the health of both teachers and pupils.

This was the housing condition of the city schools two years ago. Just how much progress has been made to relieve the situation is not definitely known. Some cities have begun extensive building programs, while others have done but little. There are still thousands of children on part time. The old, insanitary buildings are still in use. Where new buildings have been erected they have possibly not more than taken care of the normal growth of the schools, which has been great, especially the junior and senior high school enrollment.

Some cities are helping to solve the school-building problem by erecting junior high school buildings, which will relieve congestion not only in the elementary schools but also in the high school by taking the seventh and eighth grades out of the elementary buildings and the ninth grade out of the high-school building. In a city having, say, 5,000 school children there would be approximately 730 of these in the seventh and eighth grades and 250 in the ninth grade, which would make a junior high school of 980 pupils.

After many years of wasteful expenditure on eight-room school buildings, boards of education are beginning to realize that the large

building is much more economical from every standpoint; so in the larger cities they are beginning to erect buildings of 24 or more rooms. In the smaller cities one building to house all the grades would usually be sufficient and much more economical than a half dozen small buildings of from 4 to 8 rooms. Modern educational facilities can not be provided economically in a small building.

THE PLATOON OR WORK-STUDY-PLAY SCHOOL.

In the earlier days of our country the school could well be set apart almost solely for the teaching of reading, writing, and arithmetic, because the children were called upon at an early age to share in their parents' work, thus learning much that is denied the child of to-day. Instead of big fields and forests in which children could work, hunt, and indulge in free play, they now have the cities with their crowded streets and dirty alleys. Instead of the apprentice shop there is the factory in which children are rightly forbidden to work. In short, there is nothing for the children of a modern city to do except sit still in the house or run the streets.

The big question of the day is how to educate a child of the modern city by any other means than books, the study of which constitutes but a fraction of one's education. It is now recognized that work and play are as essential in education as opportunity for study in the classroom, that no child was ever educated by study alone, and that children are educated by three things—work, study, and play. But, as just pointed out, children in a modern city are deprived of two of these three essential elements of an education.

The question is, how to meet these conditions. The answer: Provide school playgrounds, manual-training shops, home-economics rooms, gymnasiums, auditoriums, and special rooms of various kinds, so that the children may secure more than a mere "book education."

In order to offer more than classroom work, many city school superintendents in making plans for a modern school plant include playgrounds, an auditorium, a gymnasium, shops, cooking and sewing rooms, and science, music, and art rooms. In some of the cities where playgrounds, auditoriums, gymnasiums, and the like have been provided they are idle part of the time. The playgrounds are used only a few minutes at the recess period, when an attempt is made to have all the children on the playground at the same time. Some of the classrooms are vacant when the children are in the gymnasium or in the manual training shops or home economics rooms, and during this time the regular classroom teachers are in their rooms alone. When the special supervisor of music, art, and other subjects comes around there are two teachers in a room—the supervisor, and the regular teacher.

In some cities the schools have been so organized that all the plant is in use all the time school is in session. This has been accomplished by dividing a school into two parts, each having the same number of classes and each containing all the grades housed in the building, whether it be six or more grades. One part, which may be called the A school, comes to school in the morning, say at 8.30, and goes to classroom for reading, language, writing, arithmetic, history, or geography. While this school is in classrooms, it obviously can not use any of the special facilities; therefore the other school—B school—goes to the special activities, one-third to the auditorium, one-third to the playground, and one-third is divided among such activities as the shops, laboratories, drawing and music rooms. At the end of one or two periods—that is, when the first group of children has remained in school seats as long as it is thought good for them at one time—the A school goes to the playground, auditorium, and other special facilities, while the B school goes to the classrooms. This, in brief, is the plan in operation in 53 cities of the country, and is variously called the work-study-play, platoon, duplicate school, companion class, Gary, and other plans, but all are based upon the same principle, that of providing for work, study, and play by operating the school on the same basis on which all other public facilities are run, i. e., multiple use of facilities all the time.

It is evident that more children can be accommodated by a platoon system. The increase in housing capacity, however, varies according to the use made of playgrounds, auditorium, etc.

In reporting upon the increase in housing capacity made possible by organizing their schools on the platoon plan superintendents made the following reports: Housing capacity in the Akron, Ohio, schools was increased by the platoon plan 25 per cent; in Birmingham, Ala., 33 per cent; in Cuyahoga Falls, Ohio, from 10 to 40 per cent, varying in the different schools according to the number of special activities provided; in Dallas, Tex., 30 per cent; in Detroit, Mich., 33 per cent; in East Chicago, Ind., 50 per cent; in Gary, Ind., 40 per cent; in Montclair, N. J., 15 to 20 per cent; in Newark, N. J., 30 per cent; in New Castle, Pa., 25 to 33 per cent; in Passaic, N. J., 33 per cent; in Philadelphia, Pa., 20 per cent; in Pittsburgh, Pa., 10 to 70 per cent, varying in the different schools according to the number of special activities provided; in Rockford, Ill., from 20 to 25 per cent; in Sewickley, Pa., 25 to 33 per cent; in St. Paul, Minn., 20 per cent; in Stuttgart, Ark., 40 per cent; in Warren, Ohio, the highest increase in any building, 40 per cent, with an average of 19 per cent; in Youngstown, Ohio, from 20 to 30 per cent.

Detroit, Mich., began only a few years ago to experiment with the platoon plan, which proved so successful that it was decided to place all the elementary schools on the plan. Already 53 platoon schools have been organized in that city. Pittsburgh, Pa., which a year ago had 6 platoon schools, now has 15. Wilmington, Del., in order to relieve the congestion took two old buildings, remodeled them at little expense, and organized platoon schools, thereby accommodating more pupils and offering them opportunities for an education that had long been denied them. Thus one might continue through the list of cities that have organized platoon schools to show that this type of organization is growing in favor in the cities where such schools are in operation. One superintendent reports that as soon as he had organized a platoon school and had it in operation for a few months other sections of the city began to demand a school of the same kind.

Some of the advantages of the plan can best be expressed in the words of school superintendents who have organized platoon schools. Mr. Charles L. Spain, deputy superintendent of public schools, Detroit, Mich., writes:

Before one can become committed to the platoon school idea he must, as a prerequisite, believe in the social aims of education.

One who holds tenaciously to the formal training idea and believes that the end and aim of the elementary school is to give a thorough training in the tools of education may well be satisfied with the traditional form of elementary organization and will naturally look askance at all innovations.

To one who believes that in a democracy the aim of education is to enable each individual to develop to the fullest extent his individual powers by doing those things which are beneficial to society as a whole the platoon school, with its socialized activities, comes as a satisfactory solution of the elementary-school problem. Progressive educational thinkers are becoming daily more convinced that the big impelling motive in education is the social motive. All of our schools must in the future strive to realize more fully the social aims of education. The platoon school does this in a marked degree.

Mr. William Davidson, superintendent of schools, Pittsburgh, Pa., who has organized the elementary schools of that city on the platoon plan, says:

The platoon program undoubtedly creates an opportunity to introduce a health program of the right kind and sort in the public schools; special subjects are much better handled and taught, and at the same time in the regular subjects teachers have a higher degree of efficiency. The plan has developed a spirit of cooperation, and the teachers will not turn their backs on something that has given them real vision and inspiration. My observation is that a principal, no matter how good under the old plan, is immeasurably better under the platoon, since the plan creates an opportunity professionally to administer a school better. The platoon plan solves the real problems of the elementary school. In this plan we have a distinct advance over the old type, thanks to William Wirt, who brought over the horizon the biggest and finest advance of the century in elementary education.

The advantages of the plan as claimed by Mr. Lee Gilmore, supervising principal of the schools at Oakmont, Pa., are:

1. An equitable time distribution between work and play.
2. Subjects taught by specialists who have had specific training and preparation for their work.
3. The right kind of apparatus for presenting required work and rooms for special subjects where this apparatus and material may be kept properly.
4. Physical training and health education taught by those with the right kind of preparation and with the right attitude toward their work.
5. The opportunity for a longer school day by giving the pupils sufficient activity so that the regular academic studies do not become fatiguing.

I claim for the platoon school product a higher degree of mental efficiency, a superior physical development, and a moral outlook and attitude which will provide for a cleaner citizenship based on democratic principles and ethical conduct. The specializing agencies giving contact with nature, music, and art are replete in lessons which result in character building and a cleanly viewpoint toward life. The physical training work inculcates a spirit of fair play, an attitude of unselfishness, and a practical working of the golden rule.

I am not before you to-day advocating the platoon school as a cheap type in education. I do claim a superior product at no greater cost than in what we call the old type of school.

Quotations from the speeches, pamphlets, and letters of other superintendents who have organized platoon schools would emphasize the foregoing citations.

A question often asked by those who would emphasize the three R's is whether these do not suffer in a work-study-play school. Educational tests given in Pittsburgh, Detroit, and in other places show that the children in the platoon schools rank as well as those in the traditional type school.

There is no reason why children in the platoon schools should not rank as well in the academic subjects as the children in the other type of school organization, since they have on a six-hour a day basis 210 minutes for language, arithmetic, geography, and history, or the same amount of time as is given those subjects in the schools not organized on the platoon plan.

The platoon or work-study-play plan of school organization is not being confined to the large industrial centers as may be seen from the list of cities reporting platoon or work-study-play schools. A few years ago it was thought that this type of organization was suitable only to such cities as Gary, Ind. The impression got abroad that the Gary schools were vocational schools, and that the Gary plan, as it was called, was not suitable for any communities except industrial centers. The fact of the matter is that the Gary schools never have attempted vocational work in the elementary grades. All they have attempted is general manual training by having the children make things of some use instead of having them work on models, as is done in many manual-training shops.

The platoon or work-study-play plan, once called the Gary plan, is adaptable to any community. There is no standardized platoon

school. Some superintendents do not provide auditorium periods, some do not include grades one and two in the organization, some have only a five-hour day. After a superintendent has decided that he is willing that more than one child shall use the same school seat at different times of the day, he may organize his school with a longer or shorter school day, he may teach any kind of manual training he wants to, he may or may not have auditorium periods, but if there is an auditorium in the building it should be used not alone because it is economical to do so, but because the auditorium exercises have educational value.

Every indication is that the platoon plan of school organization is here, and that within the next few years scores of cities will have some or all of their schools operating as platoon schools.

There are, however, many problems to solve. On the mechanical side there are such problems as the care of wraps, provision for play in bad weather, the lunch hour. On the educational side there is the problem of the auditorium period. This is being solved, and, when it is, this period will be one of the most valuable ones of the day. The training of teachers for platoon schools is another problem, but the lack of teachers experienced in platoon schools has not deterred superintendents from organizing one or more such schools, since they have been able to find enough teachers within their system or elsewhere to take charge of the special activities.

In order to discuss some of the problems of the platoon school and to discuss methods for their solution the Commissioner of Education invited those interested in the platoon plan to a conference in Chicago in February, 1922. There was a hearty response to the invitation, and for the first time the platoon or work-study-play problems were discussed by a group of superintendents who had the plan in actual operation. Several superintendents who had not yet organized platoon schools were present and asked numerous questions. So successful was that first conference that the Bureau of Education was requested to call another in 1923. At this writing, invitations for the conference have been issued to all those who have written to the bureau that they have the plan in operation and to those who have requested information regarding the organization of platoon schools. The number of acceptances received indicate that interest has greatly increased since last year.

At the conference held in February, 1922, there were certain features of the platoon plan which practically all speakers emphasized. For example, that the plan is adaptable to any type of community; that it enables each school system to have an individuality of its own; that it not only increases the capacity of the school but greatly

enriches the school life of the children; that it is not necessary that a city be industrial or crowded in order to have the plan—the plan lending itself to any kind of community; and that the academic work does not suffer, but on the contrary improves under the plan.

TESTS.

A few years ago when several persons formulated standardized tests in arithmetic and two or three other subjects, it was stated by some superintendents, teachers, and others that tests of this kind were impractical, and it was predicted that they would never be generally used. This prediction has not come true; scores of tests have been formulated covering nearly every subject from the kindergarten to and including the high school. Every progressive school system is using a variety of standardized educational, or achievement, tests, as they are now generally termed.

Some superintendents, however, have not made the best possible use of such tests from the fact that they have used the tests to see how the score made by the pupils in their respective schools compare with the standard score, or with the score made by the children in a neighboring city. This use of the tests may help stimulate interest, but it is only the first step. Some superintendents have been taking other steps by using the tests to compare different methods of instruction, to determine how much drill is necessary in certain subjects, etc. In brief, the standardized educational test is now recognized as a most valuable means in analyzing a school system. A school survey of classroom instruction is no longer considered complete without the use of achievement tests.

Another form of test that has been introduced into many schools within the past three or four years is the intelligence test. This type of test is being used to assist in classifying children into groups of like mental ability. Although these two types of tests—achievement and intelligence—have been found valuable in classifying pupils, they have not taken the place entirely of the traditional examination to assist teachers in determining whether pupils should be promoted. The traditional type of examination is, however, being considerably modified, so that the papers may be graded with accuracy. As has been pointed out time after time in various publications, the traditional type of examination could not be graded to show whether a pupil made 50 per cent or 95 per cent, since the grading was purely subjective, depending partly upon the frame of mind in which the teacher was when reading the papers.

A newer type of examination is coming into use and will no doubt become general when its merits are understood and teachers learn how to formulate such examinations. These examinations admit of but

one answer, which is either right or wrong. Tests or examinations of this type may be classified as the true-false examination, the recognition examination, and the completion examination.

Such tests aid in the marking of papers, since the answer is either right or wrong. There are, however, other advantages, such as saving the time for both pupil and teacher. Dr. Walter S. Monroe, director of the bureau of educational research, University of Illinois, says regarding this new type of examination:

The pupil is called upon to do little or no writing in giving his answers, and he is therefore able to respond to a large number of exercises. The scorer will have little or no occasion to exercise judgment, as he will need only to note the brief responses given by the pupils. Thus the labor of scoring will be greatly reduced. The saving of time in the giving and scoring will more than offset any additional time that may be expended in the construction of the "new examination." Another advantage is that the examination can be made more comprehensive. It is traditional for examinations to consist of 10 questions. A few are limited to a smaller number, and only occasionally do we find examinations consisting of more than 10 questions. The pupils can not write upon a large number of questions in the time allowed. Thus the scope of traditional examinations is necessarily narrow. We have stated that true-false examinations should include not fewer than 50 exercises. Examinations consisting of completion exercises or recognition exercises should have a corresponding length. Thus the new examination may be made distinctly larger in scope. Children are apt, also, to be interested in the new examinations, which are distinctly different from the usual type of school exercise, and which make an appeal somewhat in the nature of a game. In being relieved of much writing, which especially in the case of young children amounts in itself to a laborious exercise, they are probably less fatigued and are able to devote all their energies to the process of thinking.

SPECIAL CLASSES.

More and more the city schools of the country are making provision for the pupils who are misfits in an inflexible grading and promotion system. The special schools of Oakland may be mentioned as a typical example of the provisions being made for exceptional pupils. In that city more than 2,000 children each semester enter these classes, and most of them succeed in the work that they are given to do. Under an inflexible system most of them would be failures. These classes are called, respectively, atypical, limited, opportunity, and accelerated. Gifted pupils are not yet sufficiently provided for, which is also true of other cities; but more than 1,200 special promotions are made each semester. When these pupils reach the high school they do the best work of the school.

Special atypical classes are for children who are found by actual trial in school work and by mental test to show such mental retardation that they can not make satisfactory progress in a regular class with a reasonable expendi-

* Univ. of Ill. Bul. No. 9, "Written Examinations and Their Improvement."

ture of time and effort. Pupils in such classes usually have a mental retardation of three years or more. These classes are limited to an enrollment of 16 pupils each. The course of study varies widely from that of regular classes, manual work being strongly emphasized.

Special limited classes are for children who are so slow or dull mentally that they can not keep pace with regular class work. The purpose of such classes is to accommodate the overage, slow pupil, modifying the content of the course of study and the rate of progress so that such pupils may pass up through the grades, getting the most essential parts of the work of each grade and passing on for some training in the upper grammar grades or junior high school before the compulsory age limit is reached. Most of these pupils, if held to a rigid standard of regular grades, would reach the compulsory age limit and would pass out into industrial life long before finishing the elementary grades. Twenty-five to thirty pupils are expected to be the maximum for a class.

Special-opportunity classes are for those children who have good mental capacity but, because of lack of progress, due to illness, moving about, or other cause, are working in grades below where they should be. The purpose of these classes is to give such help as is needed quickly to adjust the pupil to take up work with a regular class which fits his capacity and needs.

Accelerated classes are for those pupils who have superior capacity. They may take an enriched program or progress more rapidly, or both. Any group of children moved on together from one class toward a higher group at a rate more rapid than normal should be classified under this head.

UNIFICATION OF THE SCHOOL SYSTEM.

One of the criticisms that have been directed against the American public school is that it has been wasteful of the pupil's time, largely because of the fact that there has been a lack of unification in the program of studies. In brief, there has not been a straightaway course from the kindergarten on through the high school. There has been a break between the grades and the high school and one between the kindergarten and the first grade.

The break between the grades and the high school has been due largely to the fact that the work of the seventh and the eighth grades has repeated that of the fifth and sixth, thus having a backward rather than a forward look.

In order to articulate better the elementary schools with the high schools, grades 7, 8, and 9 have been organized as a unit in many cities and made to retain some of the best characteristics of each. The seventh grade, or especially the low seventh, is usually considered the period of adjustment, the high seventh and the low eighth the period of exploration and preview, the high eighth the period of provisional choice of electives, and the ninth the period for electing a curriculum or courses.

The organization of the seventh, eighth, and ninth grades as junior high schools, or intermediate schools as they are called in a

¹ See also Bul. 12, 1923, U. S. Bu. of Educ.

few cities, is from all reports doing much to bridge the gap that existed between the grades and the high school. Pupils in the junior high school are no longer compelled to spend two years in reviewing the work of the fifth and sixth grades. After they have passed through the adjustment period of the low seventh, they are ready to begin taking a general review of literature, science, mathematics, social science, and other subjects which are eminently worth while to any pupil, whether he continues in school or not; but if he does continue, the general view that he has obtained enables him to make a less random choice of courses or curricula. The old seventh and eighth grade program of studies offered nothing new; it gave no general outlook; it confined itself to review. The program of the modern junior high school opens up a new world to the pupil; it gives him a forward look, thus better preparing him to begin high-school work; or, if he must leave school, he does so with the feeling that he has not wasted his time in the dull, wearisome repetition of the traditional seventh and eighth grades.

So strongly has the junior high school idea taken hold of not only school men but of the public in general that no school system is now considered complete without its junior high school organization. Practically every city that does not have such organization is planning to have it. It should be noted, however, that in some cities the organization of junior high schools has been a more or less mechanical matter which may be a step toward the junior high school, but unless the fundamental idea is completely conceived and worked out the name junior high school should not be applied.

Serious attempts are being made to bridge the gap not only between the elementary school and the high school but also between the kindergarten and the first grade. In many school systems the complaint has ceased that children who have had kindergarten training do not fit in with the methods in vogue in the first grade. There is now less complaint than formerly, since efforts have been made to build the first-grade course upon the modern kindergarten course. Only recently a committee composed of both kindergarten and first-grade supervisors and teachers prepared a course of study for the first grade based upon a kindergarten curriculum previously prepared by the kindergarten specialists of the Bureau of Education as Bulletin, 1919, No. 16. This kindergarten-first-grade course has been published by the Bureau of Education as Bulletin, 1922, No. 15, which has been in great demand by supervisors and others interested in bringing about a better coordination between the kindergarten and the first grade.

One of the plans adopted in some cities to unify the work of the kindergarten and the first grade is by means of a kindergarten primary supervisor. At Richmond, Va., for instance, the kinder-

garten-primary supervisor who has had experience in both kindergarten and primary grades, emphasizes closer cooperation in the thought and work of these two formerly unrelated departments. Joint meetings of the kindergarten and first-grade teachers are frequently held to work out plans for cooperation. A committee has been at work considering the first-grade course of study so as to fit it better to the needs and powers of little children. In order to better correlate the kindergarten and primary work at Duluth, Minn., teachers have been encouraged to undertake the work of the grade preceding or following their own; so there has been planned a rotating scheme from the kindergarten through the second grade, the kindergarten teachers taking grade assignments, and the first and second grade teachers taking kindergarten assignments.

At Pittsfield, Mass., the afternoon work with the primary children in the kindergarten room has proved beneficial to the children and of real assistance to the kindergarten-primary teachers. The children appreciate the room without desks, and also the chance for communication with each other, which is of sociological value.

The misunderstanding that often arises between kindergarten and first-grade teachers is no doubt due largely to the fact that each has an entirely different philosophy of education for these two groups of children.

School officers often do not understand what the true purpose of early education is. Says Miss Mary C. Mellyn, assistant superintendent of the Boston public schools:

When the average school official talks to a kindergarten teacher, he says blandly, "keep the children happy." When he talks with a primary teacher, he says with a more serious mien, "keep the children busy," and this attitude of mind has done more than any other to keep the primary school and the kindergarten separated. Let us recognize in starting out that children are happy only when they are purposefully busy. Oftentimes the busy child of the primary school is an irritated child, because in the futile task set him he recognizes no purpose. With all children, life is a serious attempt to solve problems outside of school, and it should be so in school. * * * Purposeful, meaningful work, reaching down and tapping instinctive forces, the capitalizing of capacities for leadership, etc., in short a better knowledge of childish needs and resources, will lift all primary schools and kindergarten teaching on to a pedagogical plane unknown.

CHAPTER V.

RURAL EDUCATION.

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CONTENTS.—Significance of the problem of educating rural children—State departments of education and the rural schools—Equalizing educational opportunity—Supervision of rural schools—Rural teachers; their certification, preparation, salary, and conditions under which they work—Centralization and consolidation of rural schools—High-school facilities for rural children—Agricultural education in rural schools—Rural school buildings—State courses of study.

SIGNIFICANCE OF THE PROBLEM OF EDUCATING RURAL CHILDREN.

The significance of the efficiency of schools for rural children to the Nation as well as to the farm population may be judged in part by the number of children affected. Careful estimates made in the Bureau of Education, based on figures given in the United States Census Report for 1920, indicate that approximately 10,000,000 of the children of the country live in rural territory—that is, in the open country—that approximately 9,000,000 are enrolled, and approximately 7,000,000 are in average daily attendance in open-country schools.

In making the estimates quoted above the Bureau of Education considered the 9,000,000 people living in incorporated places below 2,500 as urban rather than rural, reversing the usual classification of the Bureau of the Census. It follows that of the 21,000,000 children (approximately) enrolled in all schools in the United States, 11,000,000 are in urban and 10,000,000 in rural territory—chiefly in open country and small village schools. Of the 11,000,000 urban children enrolled, approximately 9,000,000, nearly 79 per cent, are in average daily attendance, while in the open-country schools approximately 7,000,000, or 70 per cent, are in average daily attendance. The average number of days attended by each pupil enrolled in urban schools is 143, in open-country schools, 96. (Data are for the school year 1919-20.)

These figures in themselves indicate two important phases of the problem of educating rural children: First, the large number of children affected, namely, 47 per cent of the children enrolled in all

schools; and, second, the inequality of educational opportunity here shown in terms of school attendance and length of term.

The term "rural" applied to schools and children has been used loosely and has not a definite country-wide application. Some people think of rural schools as those of the one and two teacher variety located in the open country; to others, rural means all schools, regardless of size, located in the open country or attended chiefly by children living on the farms or coming from farm homes. Official statistics are based on the census differentiation between urban and rural, which is the 2,500-population line. All children living in places with fewer than that number of people are classed as rural; others as urban. It is apparent, however, that comparisons of rural and urban schools and conditions affecting them should be made on a different basis. In school organization, length of term, salary, and qualifications of teachers, school buildings and equipment, and other important educational factors, schools in the smaller towns, particularly those of between 1,500 and 2,500 population, approach more nearly city than open-country conditions. Therefore, rural-school data based on this differentiation can not be relied upon to show the situation as it exists in open-country schools, since they are materially influenced by the schools in the large group of cities and towns below 2,500 in population.

The education of the children enrolled in the open-country and village schools, whether one or two teacher or centralized, offers the most serious and difficult of our education problems. It is their welfare that is most affected by the conditions, policies, and progressive movements considered in this chapter and with which this discussion is chiefly concerned.

Concerning the country at large it must be admitted that we are making progress slowly in rural education, especially in view of the increased knowledge of and apparent interest in the subject.

Increased interest in and knowledge of rural-school conditions.—

The general spread of the realization that better schools can and should be furnished rural children is fundamental in the progress made during the biennium. The idea of giving publicity to school conditions and needs is not new among the cities, but has only comparatively recently extended to rural communities. That country boys and girls are not getting fair treatment educationally; that rural people do not get from the State system or State educational institutions the same service that cities get; that they are deprived of the advantages of the public institutions of higher learning because of the poor resources of the lower schools; that they do not participate in the general benefits in proportion to the amount they

pay for school support; and that the farmer often pays more and receives less in education returns than his urban fellow citizen—these are comparatively new ideas to farm people.

For many years the root of the evil has been that the farmers themselves apparently did not realize the real conditions. Devoted reformers, philosophers, and educators have been traveling the length and breadth of the land preaching the inefficiency of the little old red schoolhouse. The farmer himself has not always responded to the appeal of others, nor has he taken the initiative in making demands for better schools and changed systems. A new order is upon us. Economic conditions and the aroused class consciousness among the farm group, manifested in political, social, and economic ways, have an educational significance. There is apparent a new demand from the farmers themselves in large numbers and in organized groups for a just share of the benefits of public education for their children.

The rural-school survey of New York is an example. The demand for this survey originated in a conference of farmers held at Cornell University. It was conducted under the direction of a committee composed largely of members of the farm organizations. Another instance is found in the activities of the Arkansas education commission appointed by the governor and made up in large part of farmers. It was primarily a farm group in a State predominantly agricultural economically, which took the initiative and raised money to finance a complete survey of the State educational system.

There is also apparent a new interest on the part of school officials in the dissemination among farm people of more definite knowledge of their schools, not only that concerned with financial and administrative conditions, but that concerned with schoolroom practice, and supervision, also. Parent-teacher associations, school and community leagues, or other organizations known by various names are being formed in rural communities in nearly every State, which show an intimate interest in classroom work. There is noticeable a concerted effort on the part of public educational institutions, especially normal schools, of superintendents, supervisors, and teachers to show to their rural patrons the difference between good and bad teaching, and the meaning of professional supervision in the education of their children through actual demonstration of school work rather than through general propaganda.

More definite lines of progress.—The growth of large and important movements in education can not always be measured by time periods, especially when extending over so limited a period as two years. However, definite and tangible progress has been made

during the past two years in several ways. Among the most important are: (1) The tendency on the part of State departments to assume increased responsibility for rural schools; (2) increase in the number and scope of state-wide educational surveys with recommendations directed toward improvement of the rural school situation; (3) renewed interest in and directed effort toward the improvement of the administrative organization under which rural schools operate in order to insure or make possible more liberal support and modern administrative practice; (4) an increased appreciation of the dignity and importance of the office of the rural superintendent and the place of professional supervision in the improvement of rural schools; (5) increased facilities for preparing teachers for the special field of rural education in State and other teacher-preparing institutions, accompanied by a growth in professional spirit among those engaged in rural education; (6) the zeal with which a large number of States are centralizing and working for the centralization of several small schools into larger, more efficient ones; (7) renewed efforts to supply high-school facilities for rural children without taking them away from the farm; (8) concerted efforts in nearly all States to improve rural-school buildings and grounds, both as to sanitary conditions and those directly concerned with the use of buildings for school purposes; and (9) widespread efforts to revise and improve the curriculum more nearly to meet the needs of country children.

STATE DEPARTMENTS OF EDUCATION AND THE RURAL SCHOOLS.

Year by year State departments of education are devoting more and more time and attention to the rural schools under their direction and increasing the size of the rural school supervisory and inspectorial staff. The most progressive of the State superintendents have initiated during the biennium comprehensive state-wide campaigns for rural-school improvement, some extending over a period of years, others carried to a conclusion during the biennial period. Some State superintendents devote the major portion of their energy and that of their staff to the rural schools, considering their betterment the most important responsibility of the State department. Legislative programs fostered by the State department and devoted to the interests of the rural schools; enlargement of the State department staff through the formation of rural schools, divisions, or bureaus, or through the employment of additional rural-school supervisors as members of the regular staff; provision for state-wide educational surveys made at the suggestion of, or with the cooperation of, the State departments, are other evidences of this new spirit of leadership.

Maryland is among the States in which an organized program is being carried out under State department leadership, including comprehensive legislation of far-reaching importance passed in the summer of 1922. The State budget for public-school purposes in 1922 was increased 26 per cent, or from \$2,750,000 to \$3,500,000. The largest item in this increase is \$727,000 to be used as an equalizing fund in 15 counties which can not on their own resources with the minimum tax carry out the proposed program for higher salaries and better-trained teachers. Since 1920 Maryland has classified and added to the number of high schools, with the purpose of providing high-school facilities for all children, rural and urban, and has added 50 per cent to the State aid for maintaining high schools.

Besides these accomplishments, the program of achievement for the biennium includes provision by law for a salary schedule based on academic and professional qualifications increasing salaries of teachers and raising the qualifications required all along the line and provision for financing and administering on a state-wide scale professional supervision of rural schools. For the first time every county has in service this year one or more supervisors or helping teachers. A new course of study for rural schools, a program for training teachers which is in harmony with the new certifying requirements and in the interest of which the State conducted a campaign for increased attendance at normal schools, a plan for training teachers in service, and one for improving rural school buildings are other features of the State department's program.

During the past two years the State department has added to its personnel a bureau of educational measurements. This bureau will assist county superintendents and supervisors during the present school year to improve the work in reading and arithmetic. Measurement of the work done in 12 counties of the State in reading, arithmetic, and spelling by the use of standard tests has been carried on since 1921 through an appropriation by the General Education Board. The legislature in 1922 provided \$18,000 to continue this work and to study also attendance, promotion, and school efficiency.

North Carolina is another State which has carried on a large program for rural-school improvement during the biennium. For several years there has been a State equalizing fund which has been expended in an effort to equalize educational opportunity and the burden of school support by assisting to finance the minimum constitutional term of six months. But, as the State superintendent says, "It is almost as necessary to provide assistance for increasing the term beyond six months as it is to give aid in maintaining the six months' term." To this end, during the biennial period just closed and in formulating plans for the future, improved methods of equalization have been practiced, and increased State funds for the purpose

have been secured. This has been done in part by a large State equalizing fund, by changes in the laws affecting the county tax rates, by special State aid for rural high schools, and through a State bond issue to assist in providing school buildings.

This provision for assisting in the erection of school buildings is unique among the States. The general assembly in 1921 authorized a bond issue of \$5,000,000 as a special building fund. It is loaned to the counties for a period of 20 years, the county repaying one-twentieth of the principal and accrued interest annually. The State superintendent says:

The counties for the first time in our history are now in a fair way to erect suitable buildings for all the children. They are providing large brick buildings with auditoriums for the rural consolidated schools through the aid of the special building fund. The entire building program under construction at this time is estimated to cost when completed about \$25,000,000.

The State loan is, of course, augmented by local bond issues. The applications from the various counties far exceeded the \$5,000,000, and a system of prorating among counties has been established. Of \$3,300,000 provided of bonds sold and loaned at the time the latest report was received over three millions was loaned to small towns and villages and rural districts.

North Carolina is making progress also toward increasing the efficiency of its teachers by putting into operation gradually the provisions of the certification law passed in 1919. The State department, in cooperation with the institutions of higher learning, makes it possible for prospective teachers to meet the qualifications demanded by this law without creating a teacher shortage and for progressive teachers to increase their scholarship or professional training while in service. The number of teachers of standard grade—that is, high-school graduates with some professional training—has increased nearly 100 per cent in three years. The number of poorly qualified, nonstandard teachers was reduced from 64 per cent of the total in 1919 to 26 per cent in 1921. This was the result, says the State superintendent, of the promise given the teachers that efficiency would be rewarded. The State provided summer schools to give the teachers an opportunity to improve themselves; approximately 12,500 teachers attended during the past year.

The State program proposes also to improve the quality and amount of supervision given by both State and county and to assist county superintendents in securing better school organization, and in general administrative practice. A new State supervisor of rural schools and a new inspector of buildings and grounds have been added to the State department staff during the biennium.

Space forbids doing full justice to the programs of these and other States in which extensive programs prepared primarily for im-

proving conditions on a state-wide scale are planned and being carried out. It is possible only to suggest briefly through a few notable examples the new trend in the work of State departments of education.

Michigan has promulgated an extensive campaign for rural-school improvement during the biennium. In 1921 the State department was reorganized and all functions concerned with rural schools centralized in a division of rural education headed by a superintendent of rural education, who has four assistant superintendents of rural education. New teachers' salary and qualification requirements have been established, standards for school buildings raised, and the school term lengthened both by raising the legal minimum and by providing a State equalizing fund for that purpose assisting districts with low tax valuation and high rate.

Pennsylvania is another State in which an extensive campaign for school improvement is in progress on a state-wide scale. Consolidation of rural schools, higher qualified teachers, better salaries, increased support, and a greater degree of centralization are included in the general program. A large part of the responsibility of carrying out this program is assumed by the bureau of rural education, a division of the State department. There are in this bureau a chief and four assistants, the time of all of whom is devoted to rural schools.

State-wide educational campaigns, usually followed by efforts to secure legislation sweeping in its nature and in its effects on rural schools, have been directed by State departments of education in Indiana, Texas, Missouri, Arkansas, Oklahoma, Kentucky, New Mexico, Arizona, and Wyoming.

Increases in the State department staff.—Besides Michigan and Pennsylvania—with special divisions of rural education in the State department—the following States report increases in the size of the rural education staffs:

Arizona.—A new research specialist whose time is devoted in large part to rural schools.

Arkansas.—Added one rural supervisor, making a total of four such supervisors.

Delaware.—Reorganization of State department, all supervision under State direction, and department of research established for the purpose of advising with rural-school officers and increasing the efficiency of rural schools.

Idaho.—Two new State rural-school supervisors added to the State staff.

Kentucky.—Increased field force both by legislative appropriation and by assistance from the General Education Board.

North Dakota.—Additional State inspector of rural schools. The State now has three such inspectors.

Ohio.—Reorganization in the State department and increase in the size of the staff.

South Dakota.—Two assistants in rural supervision added in 1922; the State department has doubled in size during the past three years; there are now 20 people on the staff.

Vermont.—A new State supervisor of rural schools was provided for in 1921.

West Virginia.—Two new assistant State supervisors of rural schools, making in all three men who devote all their time to rural schools. In addition a division of sanitation and health in rural schools was established in the State department by the legislature in 1921. This division has been responsible for cleaning up insanitary conditions in rural schools and improving instruction in hygiene and sanitation.

Wisconsin.—The State superintendent says, "The entire State department of 22 members each in some way serves rural schools; three State rural supervisors spend their entire time with this work."

Wyoming.—A supervisor of rural schools has been added to the State department. The department has devoted itself during the biennium to special efforts to increase public interest in rural schools through community meetings and other means of publicity.

At the close of the biennial period under consideration, 33 States report 74 State rural supervisors or staff members doing work of the type usually called rural supervision.

EQUALIZING EDUCATIONAL OPPORTUNITY.

Equalization through increased State support.—Much of the legislation passed during the biennium was inspired by a desire to give rural children an opportunity for an education more nearly equal to that now furnished city children. The first requisite to an efficient school system is adequate support. While constitutions or statutes of all the States promise an equal opportunity for an education to all children within their borders, few, if any, of them have so far lived up to this promise. Education has been almost entirely a local matter, and the local unit which in thousands of instances is a district containing a one-room one-teacher school is free to have as good or as poor a school as its people are willing to maintain. The difference in opportunity offered is not confined to that between rural and city schools. Children living on neighboring farms are often so unequally provided for educationally that, while those in one family attend a school with adequate plant and facilities, trained teachers, and nine months' term, those of the family on the adjoining farm attend a one-room school with an untrained teacher in charge and a term of three or four months in length. Larger units of support and better administrative practice are needed to improve such school situations.

There is a growing belief that the State is the logical unit to assume a share of the burden of support large enough to guarantee at least a fixed minimum of schooling to all children within its boundaries. That this fact is more and more recognized is evidenced by the

Trend among States, usually led by the State departments, to increase the amount and, if possible, the proportionate share of school support borne by the State. That these two are not necessarily the same thing is apparent. The cost of education has been rising as other costs rose. The unit of support most easily adaptable to changed conditions is, of course, the local one. State legislatures are often slow to act, but schools must not be closed while they deliberate nor during the long intervals between legislative sessions. Therefore, local units have found it necessary to assume an increasing burden and an increasing share of school support during recent years. This is true even in those cases in which the amount of State support has been increased.

In supplying funds for a certain minimum amount of education, the State must also assume the duty of setting up minimum standards which all schools must meet. Such standards may be based on various essentials, but the one most generally recognized is that of the qualified teacher. It follows then that, in seeking to equalize both educational opportunity and tax burden, one naturally looks upon salaries of teachers as one item of expense to be borne by the State with the corresponding demand of certain fixed minimum qualifications from those who receive them.

In considering equal educational facilities one also thinks at once of the number of children to be educated. The expense of conducting schools does not parallel attendance exactly, since a small school no less than a large school must have a teacher who is well qualified and sufficiently paid. However, average daily attendance, together with the number of days school is taught, usually grouped together as aggregate attendance, is an important item in estimating the expense of school maintenance.

Number of teachers and aggregate attendance are becoming of increasing importance in the distribution of State school funds and are replacing the inequitable method of distributing on the basis of per capita of school population regardless of whether or not children attend school. Another effort toward equalization adopted by some States is through providing State aid for weak districts, sometimes given for special purposes such as increasing the length of term or the salaries of teachers, sometimes as in Maryland apportioned to counties unable to reach State school standards on their own resources. State aid for the encouragement of certain specified progressive movements, such as providing buildings which comply with hygienic and sanitary requirements established by the State, or for consolidation or centralization of weak schools into larger ones, may or may not equalize educational opportunity, depending on local conditions and methods of distribution. Such aid for specific pur-

poses may apportion the State funds to schools or districts best able to carry their own burdens rather than to those least able to do so.

Increased State contributions to school support.—In general, the increases in State contributions to school support which have been made during the biennial period are intended to have an equalizing influence. Some are directly equalizing in their nature; others aim to encourage or promote particular measures which are believed to increase school efficiency. No effort is made to distinguish between equalizing and other funds in the summary given here of States reporting progress in this direction:

Alabama.—The State now provides a bonus fund of \$100,000 for distribution by the State board of education, 80 per cent of which is to be used in lengthening the school term and otherwise meeting conditions in rural schools. A portion of the salaries of rural supervisors was paid from this fund also during the current year.

Arizona.—There has been a large increase in the State fund apportioned for schools. It now reaches \$25 per child in average daily attendance. The amount contributed by the State to each county, combined with the amount received from county taxation, is large enough for each one-teacher school to receive a minimum of \$1,500 and each two-teacher school a minimum of \$3,000 per annum.

California.—Both State and county contributions to school support have been materially increased since 1919. In 1920 provision was made for rural-school supervisors whose salaries are to be paid in large part from State funds. Under the terms of this law 50 new rural supervisors are employed.

Connecticut.—State aid toward teachers' salaries has been increased and high-school tuition and conveyance allowance also under certain conditions. The result is that the State now pays as high as 76 per cent of the teachers' salaries in some instances.

Illinois.—\$2,000,000 was added to the State distribution fund in 1920. This fund now amounts to \$8,000,000 per annum.

Indiana.—A law passed in 1921 provides for a State school levy of 7 cents on each \$100 taxable valuation, of which 30 per cent is used to extend to eight months the school term of school corporations unable without aid to provide more than three or four months of school per year. This money may be used also for school supplies, transfers, and transportation.

Maine.—In 1921 a State school fund was provided to be used as an equalizing fund, giving rural districts a larger share of State money. This fund is distributed according to the number of teachers, the average daily attendance, and the scholastic population. In addition there was provided an equalizing fund to be distributed among towns having a high taxation rate and also a special fund which the State superintendent may use for the promotion of special measures.

Mississippi.—The legislative sessions of 1920 and 1922 made appropriations to equalize school terms throughout the State. As a result several of the poor white counties received practically twice as much from the State as formerly. They are thereby enabled to pay better salaries and to provide longer school terms.

Missouri.—The general assembly of 1921 passed a rural aid law increasing the amount received from the State and increasing the number of districts eligible to receive it. The basis of distribution is tax valuation.

Nebraska.—In 1921 State aid was provided for weak districts in which local taxation does not supply sufficient funds for carrying on school the required length of term. This aid is expected to enable all the schools to have a nine months' term.

New Jersey.—The legislature of 1921 provided special aid for needy rural sections and appropriated for this purpose a fund of \$100,000.

Oregon.—There is a \$2,000,000 increase in tax levy, which is state-wide and is apportioned according to the number of teachers employed.

Pennsylvania.—Fifty per cent of the teachers' salaries in fourth-class districts—that is, rural districts—are now paid from State funds. There is additional special State aid for transportation.

Rhode Island.—The State superintendent says: "We have set our faces firmly toward a standard quality for all schools. The word 'rural' is not used in our rules or regulations." The State appropriations favor small towns. There is an emergency appropriation for the support of poor schools and a bonus to promote consolidation.

Texas.—During the two years just passed the legislature appropriated \$1,500,000 and \$1,000,000, respectively, to be distributed to rural schools. This is in addition to the per capita State fund of \$13 for 1921 and \$10 for 1922. The State department explains that the distribution fund has diminished in this period, because in 1920 the 5-mill limitation on local tax rate was removed, and districts were enabled to raise more through local taxation than before.

Utah.—In 1921 for the first time the schools became the beneficiaries of a recent constitutional amendment providing annually \$25 per capita from the State school fund for every child of school age.

Vermont.—The State rebate for rural teachers' salaries was increased during the biennium; the amount of this reimbursement to towns made by the State varies according to the training and experience of the teachers employed. For 1921 and 1922 it was from \$2 to \$6 per week per teacher.

West Virginia.—State support for schools was increased in the State from \$516,000 in 1921 to \$1,375,000 in 1922. This State support has enabled poor districts to maintain their schools 7 months in 1921, 7½ months in 1922, and will enable them to maintain schools 8 months in 1923.

Wisconsin.—The salaries of rural supervising teachers has been paid from State sources since 1916. During the present biennial period the salaries of these teachers were increased, resulting in an expenditure of more than \$200,000 for rural supervision by the State during the past year. Special State aid is given also to children living over 2 miles from the elementary school and over 3 miles from a union free high school to assist in paying the necessary expense involved in school attendance.

Wyoming.—Fifty per cent of the Government oil royalty fund is given for the support of schools in this State. Last year, 1920-21, the amount equaled \$196 per elementary and \$285 per high school teacher. This year, 1921-22, the amount is approximately \$250 and \$400, respectively. Since this fund is distributed according to the number of teachers employed, it partakes of the nature of an equalizing fund and assists the small isolated rural districts materially.

Equalization through the larger unit for administrative organization.—Considerable progress has been made in enlarging the units for school administration either by fundamental changes in the administrative organization, usually brought about by legislative ac-

tion or constitutional amendment, or by centralization of small units into larger ones.

Historically, the development of schools from pioneer days and conditions has given the country four rather distinct types of organization for the administration of rural schools: The district, the New England town, the township, and the county. The district, which was the original pioneer type, still prevails with little or no significant alteration in the majority of States, particularly in the West and Middle West. The town is the basis of organization in all of the New England States; the township in Pennsylvania, Indiana, New Jersey, Ohio, and sections of Michigan, Iowa, and the Dakotas. West Virginia, in which the magisterial districts resemble in certain essentials the township organization, is sometimes included in this group. The county is the prevailing unit in the South, and the plan is being extended somewhat in the Western States.

There is general agreement among authorities on school administration and students of rural-school conditions that the small district, often containing only one school, is too small and ineffective to serve as the unit for school administration; that neither equitable distribution of tax burden nor equality of educational opportunity can be secured where it prevails, except under unusual conditions, and that it is responsible for the slow progress made by rural communities in meeting the demands of modern educational ideals.

On the other hand, the county unit may be of such a nature that it starves local initiative, responsibility, and pride in school progress. For those States in which the county is the civil unit the best solution seems to be a county unit which provides in its organization sufficient centralization for efficiency in management and retains enough local initiative and responsibility for the attainment of standards beyond the minimum set up for all schools to meet.

Some form of the county unit organization for school administration is now found in 21 States. The form differs somewhat in each as to methods of support, powers of boards of education, selection of superintendent, and the like. In most cases cities and towns exceeding a certain designated population are independent as to the management of schools and sometimes for taxation purposes. In the most centralized of the county-unit States all of the schools are under the direction of one board, usually called the county board of education.

Progress during the period.—During the biennial period just closed "campaigns" for the promotion of the county-unit idea among rural people were conducted in a number of States, culminating in most cases in an effort to secure legislation providing for or favorable to an improved unit of administrative organization. In

Oregon a law, local option in character, was secured. Four counties are now organized under its provision. In Arizona the law providing for reorganization with the county as the unit for school administration was secured but was defective. No attempt was made to put it into operation. In Missouri a bill was enacted into law providing for the county unit, but was defeated at the polls on referendum. In Virginia the effort was successful, and the county organization now prevails.

SUPERVISION OF RURAL SCHOOLS.

Supervision, as understood in well-organized city systems and as distinguished from the annual visitation of schools practiced by many county and other rural superintendents, is comparatively new in rural communities. In 25 States the superintendent is still an elective officer; in 15 of them the term is only two years. The short, uncertain tenure, long distances to travel in reaching isolated schools, excessive number of teachers to supervise, and exacting administrative duties, all combine to make the superintendent a school visitor rather than a supervisor. The statutory provision common in many States that the superintendent shall visit each school at least once a year shows the conception of the duties of the office which has until recent years been the accepted one.

During the past 10 years a different conception of the functions and responsibilities of the county superintendency has been growing among school officials and in popular favor. The more progressive counties recognize a differentiation between administrative and supervisory duties, and that professional supervision is of primary importance in increasing the efficiency of the school system. Assistants to the county superintendent, whose duties are chiefly supervising classroom instruction and allied functions, are employed in an increasing number of rural school systems. A few States, through legislative act or authority vested in State departments, recognize the importance of professional supervision for rural schools to the extent of providing for it on a state-wide scale.

During the school year 1921-22 a study was made in the Bureau of Education¹ of the general status of professional supervision of rural schools in the United States. Approximately 1,000 supervisors (not including administrative officers or clerical assistants) were engaged in supervising the rural schools. At that time Ohio had the largest number of supervisory assistants, namely, 214, and paid the highest median salary, namely, \$2,500. It does not necessarily follow that there are more supervisors in proportion to the number of schools and teachers than in some other States, particu-

¹ U. S. Bu. of Educ. BuM., 1922, No. 10.

larly New Jersey, Delaware, certain of the New England States, and Maryland.

The salaries of supervisory assistants reported at the time the study was made varied widely in the different States and among counties in the same States. The median salary in the majority of the States reported was between \$1,500 and \$1,800 per year. The highest salary paid to any supervisory assistant reported was \$6,500. During the past year since the reports were made to the bureau, salaries of supervisors have been increased throughout the States of Wisconsin, New Jersey, and Maryland, and in a number of the counties employing supervisors in the other States.

Progress during the biennium.—During the past two years California secured a law establishing professional supervision for rural schools. The State is responsible for a large part of the salaries provided. Under the provision of this law (passed in 1921) 50 supervisors were reported employed in the fall of 1922.

The Maryland law, enacted in 1922, increases the number and salaries of supervisors and fixes the number according to teachers to be supervised, the minimum being one supervisor for every 40 teachers. Two-thirds of the salary is to come from State appropriation.

Increases in salaries of all supervisory assistants are reported from Wisconsin and New Jersey; of those in certain counties from several other States. Increases in the number of supervisors are reported from some of the county unit States. Alabama, for example, reports an increase of 10 county supervisors since 1920.

Exclusive of the New England States, Ohio, Maryland, Delaware, New Jersey, Wisconsin, Alabama, Utah, and Louisiana apparently lead in their approach to professional supervision of rural schools which is both state-wide in scope and adequate as to number of teachers per supervisor.

RURAL TEACHERS—THEIR CERTIFICATION, PREPARATION, SALARY, AND CONDITIONS UNDER WHICH THEY WORK.

The urgency of the need for an adequately prepared staff of teachers for the rural schools of the Nation continues practically unabated except in isolated instances. As ideals and standards are raised through better administrative organization and practice, increase in the number of consolidated schools, extension of professional supervision and the like, there is an accompanying demand for teachers who can accomplish the ideals and live up to the standards for which improved conditions are advocated. The requirements of modern education are more complicated and difficult of accomplishment than ever before. Good buildings and grounds, improved plans for school organization and the like furnish the

necessary setting for efficiency, but only qualified administrative officers and teachers insure that high quality of instruction which is the sine qua non of efficiency in any school system.

Reports of three state-wide surveys made or published during the biennium give information on the academic and professional training of rural teachers, showing the following conditions:

In Arkansas, of 1,450 rural teachers reporting, 25 per cent had completed four years of high school; 12 per cent had one year of normal training; 6 per cent had two or more years of normal training but not in all cases beyond high-school graduation.

In Oklahoma, of 1,910 rural teachers reporting, 45 per cent had completed a four-year high-school course; 5 per cent had completed one year of normal training; 2 per cent had completed two or more years of normal-school training.

In New York, of 1,729 teachers in one and two teacher schools reporting, 54 per cent had completed four years of high school; 5 per cent had completed one year of normal training; 6 per cent had completed two or more years.²

These data correspond rather closely to those of like nature gathered for other States during the biennium preceding and to those shown by earlier studies and survey reports. They indicate no significant improvement in the educational and professional preparation of the rural teachers of the country. Some States have made considerable progress; nearly all have made some. Considering the problem and its solution in its nation-wide application, however, we have only scratched the surface.

The question of securing efficient teachers for the country's rural schools is many-sided. The main factors involved in the teacher situation may be briefly stated as follows:

1. Certification laws, which raise the standard for all certificates, particularly those of the lowest grade. The terms of such laws should be that only candidates with a reasonable amount of academic and professional preparation are permitted to teach in any school.
2. Facilities for offering specialized preparation to prospective rural-school teachers, including abundant opportunity for observation and practice in the different types of rural schools.
3. Salaries, working and living conditions, and professional status, which will offer sufficient emolument and a satisfying field of work to young people choosing a vocation.
4. The inevitable corollary to these, appreciation of and demand for professionally prepared teachers on the part of farm people, patrons, and school officers.

² Rural-school survey of New York, pp. 41, 51, and 52.

Progress during the biennium.—During the two-year period just closed 25 States reported to the Bureau of Education some progress toward improving the qualifications for certificating rural teachers. This progress is a result of laws passed in 1919 and 1921, or regulations of the State department made or put into operation during that time. The States reporting changes in the laws gradually increasing the qualifications demanded and generally looking toward a minimum of two-year courses above high-school graduation as the final standard to be attained and the ultimate elimination of examination as the method of securing certificates are: Arizona, Pennsylvania, Idaho, Ohio, Oregon, New Hampshire, North Carolina, and Wyoming.

States in which laws were passed involving the principle of gradually increasing requirements but with qualifications not so high as those required in the States above mentioned are: Missouri, Montana, and Kentucky. Kentucky requires one year of high school and five weeks normal training as a beginning prerequisite, and increases the minimum each year up to 1926; Missouri establishes increasing requirements culminating in high-school graduation as a prerequisite by 1927; Montana establishes immediately the prerequisite of two years high school and five weeks professional training. In Maryland a State appropriation of \$12,000 is provided for giving professional courses to teachers in their home communities.

A few States report that they are now back to pre-war standards through the discontinuance of the practice of issuing temporary and emergency certificates. Two report the discontinuance of one or more of the lower grades of certificates. Others make the general statement that standards have improved, but give no definite information concerning the methods of improvement.

FACILITIES FOR PREPARING RURAL TEACHERS.

Facilities for the preparation of teachers for work in rural schools are still inadequate in the majority of States. While there are exceptional institutions making excellent and constantly improving progress in this particular line of achievement, few, if any, States have adequate facilities or are training the number of teachers really needed. This inadequacy is apparent in numbers enrolled in rural courses, in the quality of the courses given, entrance requirements, and provision for observation and practice. In too many instances rural-teacher preparing courses are unformulated as to content and indefinite in aim. It is even probable that the percentage of graduates from the two-year courses in normal schools who go into the rural schools is decreasing. A study recently made of the percentage of normal-school graduates who enter the rural schools shows that

approximately 10 per cent entered in 1910, 9 per cent in 1915, and 6 per cent in 1920,³ indicating not only a decrease but showing also how small a percentage of normal-school graduates even begin their work in the rural schools. Studies made of the preparation of rural teachers in service and data on this subject set forth in State surveys confirm the findings of this study. There is apparently no doubt as to the need of a greater number of prepared teachers in the rural schools and of a more determined effort on the part of teacher-preparing institutions to meet this need.

An examination of catalogues of teacher-preparing institutions, later verified by questionnaires made in the summer of 1922, shows that there are approximately 100 institutions in 33 States maintaining departments or offering courses specially designed for the preparation of teachers for rural schools. Of these institutions, 25 reported observation and practice schools located on the campus or in adjacent rural territory. Approximately one-fourth of the institutions reporting offer *some* rural-school courses entrance requirements to which are lower than graduation from a four-year high school. No definite and complete data on enrollment in these courses or percentage of those enrolled who teach in rural schools are at present obtainable. Such reports as are available indicate that the enrollment is small in the majority of schools during the regular terms. During the summer terms, however, there is a large and constantly increasing attendance of teachers from rural communities.

The attendance at normal schools, particularly at summer courses, enrollment in extension courses, reading and special courses, are all materially increased when laws requiring higher qualifications for certification are passed. No alarming shortage in the teacher supply follows the increase in requirements so far as information is obtainable. Indeed, the contrary seems to have resulted in some cases. As an example of this, a report from the State department of Ohio, a State in which the minimum prerequisite for certification has just been raised to 36 weeks beyond graduation from a four-year high school, states: "For the first time Ohio can say that there are a sufficient number of teachers for the schools." Raising the requirements gradually, giving ample notice to all new teachers as well as those already employed, and providing facilities by which new and prospective teachers can secure the required preparation apparently works no undue hardship either to schools or teachers.

Progress during the biennium.—Massachusetts has recently designated two of its nine normal schools to give special attention to the training of rural teachers. Attendance at the normal schools increased during the year (1921-22) from 2,000 to 3,000.

³ The Output of Professional Teachers. Benson, p. 6.

Maryland: during the past two years, carried on a systematic campaign under the direction of the State board of education to increase attendance at normal schools. Representatives of the State department and the normal schools addressed high-school pupils and citizens concerning the possibilities of teaching as a promising field in which young men and women could find a life vocation. A moving picture was prepared for this purpose and shown widely throughout the State. Maryland also established one new State normal school.

Montana, Idaho, and several other States report that State supervisors spend a large part of their time training teachers in service.

In New Hampshire the interesting experiment is being tried of extending the service of the teacher-preparing institutions to the remote sections of the State by establishing short courses for teachers in these sections during the winter holidays.

In Wyoming a plan somewhat similar is in operation. The State university (the only public teacher-preparing institution in the State) holds summer sessions in rural sections remote from the seat of the university.

Montana holds three regional summer schools in remote sections under the direction of the State normal school.

Oregon reports that all rural-teacher courses in normal schools require six weeks of practice teaching in rural training schools.

Among the States reporting large increases in attendance of rural-school teachers at regular or summer normal schools are the following:

Alabama: 7,000 teachers attending summer schools (1922). *Arizona:* Very large increase due to the regulations of the new certification law. *Arkansas:* Six weeks' intensive training schools for rural teachers are established each spring at each of the four State agricultural high schools. *California, Connecticut, Florida, Kentucky, Maine, New Hampshire,* and *Oklahoma* report large increases in attendance of rural teachers at regular and summer sessions. *Kentucky* reports also two new normal schools. *Michigan:* Four State normal schools have established rural departments (the summer-schools in these departments enrolled 1,800). *Virginia:* Over 8,000 teachers attended summer school at State normals and teachers' colleges.

Teacher training in high schools.—In 21 States courses given in county normal training schools, teacher or normal training classes in high schools or in connection with high schools, are officially recognized in the certification laws. The courses may be given as part of the regular high-school course or may constitute a year's work in addition to the four high-school years. In some cases the courses are under the direction of an inspector or supervisor from the State department and are aided by State funds; in others they are maintained by the high schools themselves, independently of State aid. The following

are the States which recognize normal training of secondary grade or given in connection with high schools as fulfilling the requirements for one or more kinds of teaching certificates: Kansas, Iowa, Missouri, Michigan, Wisconsin, Minnesota, South Dakota, Nebraska, Montana, Wyoming, Oklahoma, Vermont, Ohio, Nevada, Oregon, New Hampshire, New York, North Dakota, Virginia, Arkansas, and West Virginia. A few other States legally recognize teacher-training work in high schools, but do not issue certificates on the basis of such work. Among the States reporting improvement in facilities for carrying on teacher training in high schools or county training schools during the biennium are the following:

Kentucky.—A State appropriation of \$50,000 to assist in financing county training schools; an increase in attendance in such schools.

Michigan.—County normal training classes are established in all counties except those in which there are State normal schools with special courses for rural teachers; 1,200 teachers have been trained in these schools since 1920.

Missouri.—The number of high schools giving teacher-training work increased from 107 to 129 during the two-year period.

Montana now has 23 high schools giving two-year teacher-training courses.

South Dakota has 54 high schools giving normal training work.

Vermont has 15 one-year teacher-training classes in high schools.

RURAL TEACHERS' SALARIES.

The effort to keep the schools open during and following the war exodus from the teaching profession into industrial life had two results, that of increasing teachers' salaries and of lowering the standard of qualifications demanded of applicants for certification. The prevalent economic depression among farmers is leading to a demand for, and in some instances has resulted in, decreases in the salary scale during the past two years. In many States school officials are obliged to make a determined stand to preserve the status quo in school expenditures. Salaries of rural teachers, therefore, have not increased on the whole during the biennial period. Increases previously granted rarely equalled the cost of living, consequently any decrease would be disastrous.

An investigation of salaries paid to rural teachers was made in the Bureau of Education in February, 1922. Forty-three per cent of the total number of county and other rural school superintendents reported on the salaries paid to approximately 127,000 teachers. Of these, 55 per cent were in one-teacher schools. The results of this study with some comparisons of salaries among the different types of schools are summarized briefly as follows:

In each of six States the teachers of one-room schools received a median salary between \$300 and \$400. In the same States the median salaries of teachers in consolidated schools varied from \$600 to \$1,000.

Corresponding figures for other groups are: In each of four States, one-room schools, median between \$400 and \$500; consolidated schools, medians varying from \$500 to \$900. In three States, one-room schools, median between \$500 and \$600; in consolidated schools, median varying from \$500 to \$900. In five States, one-teacher schools, median \$600 to \$700; in consolidated schools median varying from \$700 to \$1,000. In six States, one-teacher schools, median between \$700 and \$800; consolidated schools, median varying from \$900 to \$1,400. In 11 States, one-teacher schools, median \$800 to \$900; in consolidated schools, median varying from \$900 to \$1,300. In six States in which the median salary in one-teacher schools is between \$900 and \$1,000 the lowest median for teachers in consolidated schools is between \$1,100 and \$1,200 and the highest median between \$1,600 and \$1,700. In five States only did the median salary of teachers of one-room schools exceed \$1,000. In these States the median salaries for teachers in consolidated schools varied from \$900 to \$1,400.

This study also shows that in nearly all of the States the median salary of teachers in the two and three room schools is approximately \$100 a year higher than that paid in one-room schools. In most of the States the median salary for consolidated schools is from \$200 to \$500 higher than that in one-teacher schools. In the village schools salaries are not generally higher than those paid in consolidated schools except in a few States where there is a decided difference in favor of the village schools.

The median salaries here given are near the average salaries for the groups. Approximately one-half the teachers reporting in each group received lower, and one-half higher, salaries, than those given. In 19 States the teachers in the lowest salary groups in one and two teacher schools received less than \$300 a year.

A similar study of the salaries of teachers in city schools made during the same school year shows that the median salary in cities of 2,500 to 10,000 in population is between \$1,000 and \$1,100; in cities of from 10,000 to 25,000 population, between \$1,200 and \$1,300; in cities between 25,000 and 100,000 population, between \$1,800 and \$1,900.

Comparing the salaries received in cities of 2,500 to 10,000 in population with those paid in consolidated rural schools it is found that the latter received from \$100 to \$500 a year less than the salaries paid in these cities. In other words, the city teachers received from 20 to 60 per cent more for similar services. It is well known that elementary teachers in the very large cities receive very much higher salaries than those paid in the smaller ones.

No one will contend that the salaries paid city teachers are too high. The services of these teachers are responsible for the efficient standards reached by city schools and for the fact that the quality of the instruction given in city schools, wherever measured by standard tests, is uniformly higher than in rural schools. If our country children are ever to have educational opportunities comparable to those provided for urban children, we must find money enough to pay salaries which are comparable to those paid in cities.

Several States have provided State salary schedules based on academic and professional qualifications measured by the grade of certificate. New laws of the kind indicated or salary increases through revision of old laws are reported from Pennsylvania, Ohio, North Carolina, Indiana, Missouri, Maryland, Mississippi, Rhode Island, West Virginia, South Dakota, and New Hampshire. The following States report increased salaries during the biennial period: Connecticut (average in small towns \$1,000 a year), Kentucky, Maine, Massachusetts (as a result of increased aid for rural communities, elementary salaries in 127 rural towns have increased from an average of \$455 in 1915-16 to \$769 in 1920 and \$933 in 1921), New Jersey, and Virginia. The following States report definite salary schedules or a minimum salary law state-wide in its effect: California, Colorado, Delaware, Indiana, Maryland, Mississippi, Ohio, North Carolina, Pennsylvania, Rhode Island, and West Virginia. Idaho and Texas are the only States which report a reduction in rural teachers' salaries. In North Dakota a minimum salary law passed in 1921 was repealed by referendum vote.

WORKING CONDITIONS AND PROFESSIONAL STATUS OF RURAL TEACHERS.

Living conditions a serious problem.—The general changes in rural life and conditions in farm homes; the scarcity of farm labor, resulting in the necessity for the farmer and his family to assume increased burdens of farm work; increase in the number of farms under tenant management; and general economic conditions have resulted in a serious shortage of good boarding places for teachers in the country schools. Probably the best remedy yet found is the teachers' home or teachers' cottage owned or rented by boards of school trustees. In 1921 reports sent to the Bureau of Education indicated that there were at least 3,000 cottages owned or controlled by school boards, housing approximately 12,000 teachers.

The advantages of provisions of the kind described, where teachers can have privacy and live under independent and dignified conditions, are too obvious to need comment. The influence of supplying comfortable living accommodations at district expense on the quality

of service rendered, on the tenure of the teaching staff, and as a partial remedy for the present high cost of living is reported by county superintendents as eminently gratifying in practically all cases.

The number of schools in districts which provide living accommodations for teachers has increased during the biennial period just closed. Incomplete reports received from the States indicate that upward of 1,000 new homes were built during the period. Texas and Oklahoma together have nearly a thousand teachers' cottages. Colorado, North Carolina, Washington, Iowa, and Kansas report substantial growth in the movement.

Professional status of rural teachers.—Gradual but significant improvement of the conditions under which rural teachers work is one of the promising signs of a new status of rural education. Many factors combine to this end. Every influence that improves rural economic conditions, rural school organization, school buildings, salaries of teachers, and the like has its effect on the professional spirit and status of the teachers. Among them, improved administrative practice, which follows the appointment of professional administrative officers, and the employment of supervisors are perhaps the most powerful factors involved. Professional supervision has for one of its most important objectives that of giving to the rural teacher an opportunity for professional growth. It presupposes group organization and solidarity, participation of teachers in formulating and carrying out the educational policies of the system in which they work, and fosters a professional spirit among all the teachers of the system. There is being developed in many rural school systems an esprit de corps among rural teachers not surpassed in the best-organized city systems.

Special departments or courses have in recent years been established in State teacher-preparing institutions in at least 33 States. In the majority of cases and with increasing frequency entrance requirements are the same for rural as for city preparatory courses. A number of State and privately supported universities and teachers' colleges have established graduate courses, as well as courses leading to the bachelor's degree, designed for the preparation of teachers, supervisors, and administrative officers for the special field of rural education. Many of these institutions have their rural clubs and rural department publications, and in other ways foster a professional group spirit among the prospective rural teachers.

In the National Education Association, in every State teachers' association, there are departments or sections where workers in the field of rural education meet to discuss their common problems and for social and recreational purposes. The department of

rural education of the National Education Association supports a journal designed for use of rural administrative and supervisory school officials.

State supervisors of rural schools who circulate freely among county superintendents and rural teachers as representatives of the State department in rural communities, and who lead in promoting measures for rural-school improvement, encourage the growth of professional spirit and of satisfaction in educational achievement. The organization of teachers' councils in a number of rural counties, thus offering opportunity for the development of leadership and initiative; the opening up of large consolidated schools where salaries and opportunities for service are equal to those offered in urban schools; the creating of new supervisory positions and positions in teacher-preparing institutions to which successful rural teachers may aspire, increase the possibilities and opportunities for professional advancement and encourage specialization in the field of rural education. These are among the influences which develop a better professional spirit and status for rural teachers and which exert a significant effect on the rural-teacher situation.

CENTRALIZATION OR CONSOLIDATION OF RURAL SCHOOLS.

The movement generally known throughout the country as "consolidation" of rural schools, a term used differently in the various States but connoting a similar thing; namely, that of getting rural children together in groups larger than is generally possible in small one-teacher schools, is perhaps the most marked of all the progressive movements now being advocated for the improvement of rural schools. Consolidation in its best form and as promoted by its most ambitious advocates is coming to mean uniting enough territory to provide a large group of children, including those in both secondary and elementary grades; a modern building representing a good type of architecture, commodious, convenient, appropriate to its purpose, and built to suit modern hygienic ideals and to fit modern educational practice. However, neither the term nor the movement is limited to its most approved aspect. To bring together even a few isolated small schools, thereby making for increased efficiency of school work and wider contacts for rural children, is considered by many advocates of centralization a worthy effort. Different forms of centralization, whether of all or some of the 12 grades, even the means of preventing decentralization, are denominated and considered as forms of consolidation. The Utah county-district and the Michigan movement toward the township unit are sometimes called by the general term consolidation.

The centralization movement began early, as one would naturally expect, in the New England States, not so much by consolidating small districts as by abolishing them and uniting the territory into one district—i. e., a town. The laws concerning it date as far back as that enacted in Massachusetts in 1838. Horace Mann, Henry Barnard, and Horace Eaton were among the educators who early discerned the ineffectiveness of the small school and advocated better conditions through a larger or centralized unit. Transportation laws came early also in the same State. In Massachusetts there has been legal provision for it since 1869, or approximately 53 years. Maine, Michigan, New York, and Ohio had all enacted laws providing for consolidation in some form before the Civil War. Some of these early laws are very similar to those of more recent date placed on the statute books of newer States.

In most parts of New England, where at all feasible, the consolidation idea has attained solidity, permanence, and success. In 1920 Massachusetts had probably a lower percentage of the total number of children enrolled in one-teacher schools than any other State. Most of its towns are transporting children to schools either within or without their borders.

In general, the movement for centralizing schools has attained a marked degree of success. It grew slowly for many years, however. Its greatest growth has come within the past 15 years, and many States did not pass permissive or favorable laws until after 1910. Since then the idea has grown over a wide extent of territory, covering the country more or less intensively, and on the whole apparently attaining success through merit of so high a type that it could not long remain unrecognized.

The movement has now spread in some degree at least to all of the States. The following account of growth in a few States presents the conditions somewhat as they are found in others:

Of the Central and Eastern States, Indiana has made notable progress in consolidating schools and eliminating those with one or two teachers. The work of centralizing began about 1876. In the years between 1890 and 1920 the school enrollment for the State increased by approximately 54,000; the number of school buildings decreased from 9,907 to 7,981; the number of one-room schools from 8,853 to 4,880. By 1920 all but 3 of the 92 counties had effected some consolidation. The number of consolidated schools reported was one-seventh of the total number in the State; the amount spent for transportation nearly two million dollars and increasing at about the rate of half a million per year. The State department reports in 1922 six counties completely or nearly completely consolidated.

Other Central States have made similar if not so favorable achievements. Ohio, like Indiana, has a number of counties in which consolidation is complete, or practically so. A recent report from this State shows that in 13 leading counties the number of one-room schools decreased from 1,029 in 1914 to 236 in 1922. The number of centralized and consolidated schools in these same counties in 1922 was 231. Data for the State as a whole show the elimination of 1,150 one-teacher, one-room schools during 1919-20 and 1921-22. They report 200,000 pupils transported to and from consolidated and centralized schools in 1921-22 who were taught by about 8,000 well trained and qualified teachers.

In a number of States in which consolidation has not made favorable progress in the past, as well as in others in which it has done so, systematic work is being done, state-wide in extent, to promote either the extent of the movement or the quality of the work done in the consolidated schools, or both. Iowa, Kansas, Michigan, Oklahoma, Pennsylvania, and Wisconsin are among those which are very active and report a number of good consolidations in progress.

A report of consolidation in Michigan, June 30, 1922, states that 425 districts have been consolidated since April, 1919, with a total valuation of approximately \$182,000,000 and an enrollment of 17,329 children.

In Pennsylvania, State aid for transportation has increased from \$86,132 in 1919-20 to \$245,904 in 1920-21.

In the Southern States, substantial achievement is reported. Alabama, Louisiana, Mississippi, and North Carolina are among those in which state-wide progress is most apparent. Typical of reports from these States is the following:

Alabama.—There have been built 130 new consolidated buildings during the year just passed at a cost of \$1,500,000. These buildings have 500 classrooms and accommodate approximately 15,000 children; 50 or more of them have 5 or more standard classrooms, manual training and home-economics rooms, and good auditoria with a capacity of 500 to 800; 12 of them are brick and classed among the best in the State. Seventy-five per cent of the counties have from 1 to 10 consolidated schools. Montgomery County is the one most successful in effecting perfect consolidation. During the past year more than \$400,000 has been invested in five consolidated buildings in that county, completing the scheme of housing all white children of the county in 15 consolidated buildings. Through the excellent system of transportation every white child may attend either an elementary or a high school and stay home at night. More than 30 motor busses are now in use, and some children are transported 20 miles to school.

In the West, where sparsity of population and natural conditions are not favorable to consolidation except in certain sections, a fine type of the large consolidated school is springing up in some dis-

tricts. Though the number is not large, the quality of the buildings and equipment and the grade of instruction given are exceptional. The following from Colorado indicates the trend of the movement in that State and is not unlike that in others:

One of the best of the consolidated schools is at Johnstown, in the western part of the county. It is in a fine farming and leading dairy district of the State.

The new building cost \$160,000. Three separate bond issues were voted for its erection and completion, and all carried unanimously. It is intended for a junior and senior high school and a general community center. It has a fine arrangement for classrooms, laboratories for physics, chemistry, vocational agriculture and home making, offices, pure running water, electric lights, a moving picture projector, and all the other equipment of a first-class modern school. The school and community auditorium will seat more than 1,000 people, and the stage serves also as a large and well-arranged gymnasium.

The district also has a commodious grade building that might have been used for several years for both high school ~~and~~ grade purposes and a good garage to properly house its fleet of motor busses.

Colorado has 138 consolidated schools in 38 of its 63 counties.

Oregon and Wyoming both report substantial progress in 1921-22 in new consolidations and increased number of pupils transported.

The progress made difficult to estimate.—Any survey of progress in consolidation based on the number of schools, number of consolidations, or comparative estimates of rapidity with which the movement is spreading in States, is difficult because of the differing conceptions of the meaning of terms and because of a variety of differing conditions furthering or limiting achievement, as the case may be. That the movement is taking on more substantial form in size and expenditure, as well as quality of service rendered, has been indicated above.

If decrease in the number of one-room schools is a just criterion by which to judge, some idea of its extent may be gained from facts disclosed by a study made in the Bureau of Education. In 33 States for which comparisons may be made, the number of one-room schools decreased 17,635 in the decade 1910 to 1920. This is a decrease of about 11 per cent in the 10-year period. As a result of the same study, it is estimated that there are in the country at least 12,000 consolidated schools. In so far as transportation expenditures tell the story, the facts from the same study are as follows:

Forty States spent for transportation in 1920 about \$14,500,000. If complete reports for all of them were available, the amount would probably reach, in 1922, above \$17,500,000. Indiana spent most, \$2,000,000; Ohio and Iowa each more than \$1,000,000; Minnesota, Massachusetts, New Jersey, and North Dakota, well up to

the million mark. The number of children transported in 1920 was probably more than half a million.

Present tendencies.—One wonders why so palpably effective a movement and one so universally satisfactory when fairly tried out should have spread so slowly from auspicious early beginnings. In the Central and Middle Western States, where good progress has been made, albeit slow in most cases, consolidation has literally fought its way through, surmounting difficulties of great variety, including an experience from the lower through the higher courts in a number of States. At present public opinion continues to grow steadily more favorable. The time has even come in some States when school officials must guide and control rather than encourage sentiment that consolidation may not come too rapidly. The question now is not so much to promote consolidation but so to meet the difficulties potential to the situation effected as to insure the utmost efficiency. The size and support of the central unit; distribution of schools so as to serve the greatest number of children and leave no isolated and hopeless small districts out of reach of its benefits; professional preparation of the administrative and supervisory teaching staffs are among the large problems to which educational officials must now turn their attention.

A late manifestation of the growth of centralization and the effort to guide it intelligently is shown by the interest of county and State school officials in the formulation of plans designed to lay off into centralized units larger tracts of territory. Adoption of plans for county-wide consolidation are advocated (or even larger units) before any particular consolidation is initiated. County surveys for the purpose of planning these larger projects are more and more common, usually made or participated in by educational specialists, particularly State education officials. In at least one State consideration is now given to the enactment of a law, state-wide in scope, making it mandatory on county boards and superintendents to have such surveys made and county-wide plans approved before further consolidation is effected. These few instances indicate the trend in the direction of warding off possible discrimination against children in these backward communities where social or economic conditions or prejudice may result in increase of consolidation among progressive communities to the exclusion of children less fortunately located.

The new tendency is toward scientific study of the special problems which the ever-growing number of consolidated schools raise. It is admitted that their administration and organization require breadth of vision and ability not exceeded by the demands of any other system. That they offer problems different from those involved in the administration of small rural or large city schools is also apparent.

These and similar problems of great variety and importance must be solved in the near future.

HIGH-SCHOOL FACILITIES FOR RURAL CHILDREN.

The problem of giving farm children an opportunity for secondary education offers grave difficulties and is still an insurmountable one in many rural communities. Formerly a farmer considered it necessary, when his children reached high-school age, to make some arrangement to send them to a near-by town or city. Sometimes the farmer left the farm entirely, sold or rented it, and moved to the city; sometimes the mother and children or perhaps the children alone left for the nearest or most convenient town in which there was a high school to keep house or board during the school year; sometimes the children were sent to a boarding school. In recent years organized efforts have been made to prevent this exodus from the farm and to establish high schools within reach of rural children in which they can secure a secondary education while spending their nights under the home roof.

Some definite accomplishments toward the extension of high-school advantages to rural children during the biennium are:

(1) An increase in the number of high schools within reach of rural children, generally through some form of centralization.

(2) Additional provisions, usually legal ones, for assisting children of farmers to attend high schools in larger numbers through State, county, or local payment of tuition, board, or transportation of pupils from districts in which there are no high schools to those in which there are. Transportation or other expenses are allowed also in an increasing number of instances to children living at long distances from established or accredited high schools.

(3) Increase in the number of States giving State aid to assist high schools or in the amount given by the State for this purpose. Sometimes State aid is given to establish the high school through assistance in securing a building; sometimes it is given for maintenance; sometimes for tuition or transportation.

(4) The rise of the junior high school in rural districts. New Hampshire, Alabama, and Oregon are conspicuous in this movement. The significance of the junior high school for rural education lies in the relief it affords elementary schools and the large number of students reached in the upper grades with an enriched educational content.

(5) Spread of vocational guidance work in secondary schools. Several States now outline vocational guidance in the high-school manuals.

(6) Spread of vocational agricultural education through larger numbers of high-school students and to a greater number of boys that are not enrolled in high schools, through part-time work.

(7) Unusual interest in reorganization of secondary curricula in line with the recommendations of the reorganization series of bulletins published by the Bureau of Education. Noteworthy studies have been completed or are in progress in practically all States.

(8) Rapid development of a prevocational program of agriculture as a phase of the Smith-Hughes service.

A number of States report to the Bureau of Education progress made in supplying facilities for secondary education of rural children during the biennium.

In Alabama, in the division of secondary education, much progress has been made. The rate of growth in the high schools of the State during the past few years has been more rapid than in any other part of the public-school system. The number of accredited high schools has increased from 149 in 1920 to 184 in 1922; attendance in 1920-21 was 29 per cent greater than in 1919-20, and that in 1921-22 was 20 per cent greater than that in 1920-21.

Michigan provides high-school facilities for rural children in the following ways: (1) Through consolidation: high schools are thereby established in the home district; (2) through establishment of State-aided agricultural schools; (3) through a law providing for the payment of tuition for children residing in a district which does not support a high school to the high school supported in a neighboring district. The amount of tuition a district may pay was raised by the last legislature from \$25 to \$60 per pupil per year. Local voters may at an annual election raise this amount.

In Tennessee the number of county-high schools increased during the biennium from 496 to 533; the number of teachers employed from 1,010 to 1,474; the annual salary from \$756 to \$1,188; the total enrollment from 19,215 to 29,681; the total number of graduates from 1,703 to 2,802. In 1912 the enrollment in county high schools for white children was 2 per cent of the total enrollment. In 1922 it had increased to 7 per cent.

Other States which report an increase in the number of rural high schools or in the high-school attendance from rural communities generally through some form of centralization are Colorado, Indiana, Iowa, Maryland, Ohio, Missouri, Oklahoma, Virginia, and West Virginia.

Virginia and Indiana report a high school in nearly every county. Virginia reports an increase in high-school enrollment of 10,000 during the biennial period. Ohio an increase of 20,000 pupils. In South Carolina the number of four-year high schools increased ap-

proximately 39 per cent from 1920 to 1921; the enrollment increased 31 per cent from 1917 to 1921. These increases were almost wholly in rural and village districts.

A few States report that high-school facilities are furnished to every rural child in the State. They are New Jersey, where a greater proportion of children in high school come from rural than from city communities; New Hampshire, where a high school is within walking distance of every child; Ohio; Rhode Island; Utah, where one to six high schools are in every county district; Vermont; Connecticut, where few if any rural children are deprived of a high-school education.

The following States report the *number* of rural high schools: Idaho, 25; Kentucky, 500; Oregon, 46 (an increase of 7 over the preceding year; South Dakota (an increase of 36 high schools during the year).

The States which report an increased attendance at high school because of the payment of tuition or transportation charges from district, county, or State funds under new laws or because of increases in the amount allowed for these purposes are Connecticut, Delaware (State pays), Maine, Massachusetts (towns pay both tuition and transportation), Minnesota (State pays tuition), Nebraska, Oregon (county fund), South Dakota, Vermont (up to \$60 per year), Wisconsin, Wyoming.

The amount of State aid granted to high schools has been increased in Maryland and North Carolina.

Washington reports an increased attendance of rural children in high schools and California a new State course of study for high schools.

AGRICULTURAL EDUCATION IN RURAL SCHOOLS.

SECONDARY SCHOOLS.

Agricultural education in rural secondary schools is becoming more of the vocational type. In the year 1920-21 there were in the United States 1,721 schools offering vocational agriculture under provisions of the Smith-Hughes Act. The enrollment of students in these schools had grown from 15,453 in 1918 to 42,709 in 1921. Evening schools, part-time schools, and all-day schools are represented. Approximately 80 per cent of the schools were rural high schools, located in purely rural communities, and the students reached were largely from rural districts.

The outstanding developments in secondary vocational agriculture are a more careful statement of objectives, organization of subject matter on the basis of farm enterprises, development of part-time instruction, and itinerant teaching.

Objectives.—In the "Report of Fifth Regional Conference," held at Portland, Oreg., June 5-9, 1922, the following statement of objectives is given:

It is the purpose of vocational courses in agriculture to aid in developing a type of American farmer who possesses managerial ability and business capacity, an aptitude for farming, and the necessary technical knowledge and skill to produce and market his products, and also one who is capable of adapting himself to our constantly changing social and economic life.

This statement places the leaders in vocational agricultural education among those who plead for a broad educational background in training rural boys. The charge that everything is to be sacrificed for productive skills in educating rural boys can not be sustained in the light of this statement. Undoubtedly out of this clear statement of purpose is going to come extensive reorganization of the content of courses, so that this broader purpose may be realized.

Reorganization of subject matter.—Subject teaching in secondary vocational agriculture is passing. Instead of teaching soils, farm crops, animal husbandry, horticulture, and farm mechanics, specific farm enterprises, such as poultry production, swine production, corn production, and cotton production, are taught. Subject matter is organized about enterprises rather than by subjects, and the details of organization depend upon the jobs of the enterprise and the natural sequence of jobs becomes the sequence of subject-matter organization.

Secondary teachers.—The teacher-training programs are developing in harmony with the statement of purpose and the tendency in subject-matter organization. Further, there is a tendency through the itinerant teacher trainer to give close supervision to the beginning teacher of a definitely constructive kind.

In purely technical agriculture the prospective teacher is giving more time to rural sociology and economics. More intensive study of particular rural problems is required, and more attention is being given to survey methods as a means of determining the content of local courses.

Part-time instruction.—The present drive in secondary vocational agriculture is to reach the group of 1,937,978 boys between 14 and 20 years of age in rural communities and the age group, 20-44, numbering 8,889,244 adult farmers who are not enrolled in an all-day school. Of this number, 11,072 were reached in 1921. This means that only one out of every 997 boys is at present being reached in part-time work. One out of 32½ rural boys enrolled in school is reached in all-day classes. It is felt that this group not in school offers the biggest challenge to vocational education in agriculture.

Itinerant teaching.—Itinerant teaching in vocational agriculture has been practiced from the beginnings in 1918 in sections of the country. This type of teaching in which one teacher serves several contiguous schools has proved its worth.

ELEMENTARY-SCHOOL AGRICULTURE.

Instruction in elementary rural school agriculture is a highly variable factor. Teachers are poorly trained, conditions under which teaching must be done are bad, and until recently less attention has been given to subject-matter organization, methods, and supervision of instruction than in secondary and collegiate agriculture. The present, however, sees an increased interest in agriculture for the elementary rural school. The interest is being manifested through the Smith-Hughes organization, through the club work of the Department of Agriculture in cooperation with the extension departments of the State agricultural colleges, and through State school officials.

There is a growing realization that vocational work in secondary schools is largely dependent for success upon the attitude toward agricultural instruction shown by students who have been introduced to agriculture in the elementary school through classroom instruction or club work. The Federal board and numerous State departments are stressing prevocational agriculture. Definite organization for teaching of prevocational agriculture to children of elementary-school age through junior projects is found in Missouri, Pennsylvania, Oregon, New York, and Oklahoma.

RURAL SCHOOL BUILDINGS.

Increased knowledge of the effects which the selection of the school site, arrangement of rooms, sanitation, ventilation, heating, and general hygiene of the school building have on the health and school progress of children has practically revolutionized our ideals in regard to the whole matter of building and equipping school-houses. Country children have apparently profited least from this increased knowledge. While indifference on the part of rural communities and a general lack of enlightened public opinion are largely to blame, a contributing cause of this neglect is found in the financial aspect of the question. This is an important one in small rural communities. Where large building plans are projected, as is done in cities and towns, the employment of trained specialists in school architecture is the accepted procedure. Small buildings, whether homes or schools, representing the expenditure of small sums of money, are believed not to warrant employment of such specialists. Local contractors, builders, or school trustees are often not familiar

with modern standards for school buildings; and small school buildings especially continue to be built without regard to appearance, the demands of modern methods of teaching, or general hygienic considerations.

Surveys of rural school conditions, made during the past five years, have given considerable attention to the discussion of rural school buildings, and have done much to enlighten general public opinion on the subject and to call the attention of school officers to the fact that school buildings of the prevailing type often menace the health, morals, and educational welfare of country children. Leaflets and pamphlets on the subject of school buildings are now issued by nearly all State departments of education. Teacher-preparing institutions and social and community organizations are assisting in spreading health propaganda and explaining the serious results of neglecting hygienic provisions when building schoolhouses. Excellent score cards for scoring or grading rural school buildings are now available, and a number of States issue officially cards for this purpose. Handsome new buildings, such as are constantly being built in increasing numbers as the centralizing movement gains in extent and popularity, serve to raise the standards and to improve the taste and ideals of the people in communities other than those in which they are located. These and other factors tending toward substantial improvement are of growing and noticeable importance.

There are at least four organized direct efforts toward improving the quality of rural school buildings worthy of mention. In each of these some substantial progress has been made during the biennium. Briefly, these efforts are:

- (1) Through statutory provision to the effect that all plans for school buildings must be approved and buildings regularly inspected by State officials, usually those connected with the State department of education. If one can judge by the reports of recent surveys and current literature on this subject, this method is one which apparently meets the greatest favor with school and health authorities. It presupposes not only centralizing of authority for approval and inspection of buildings in the State department, but also adequate appropriations for the subsequent enforcement of these provisions.

- (2) Through the promotion of centralization of small schools. This pooling of effort and resources makes it possible to obtain the money necessary to provide modern school buildings.

- (3) Through State appropriations for building purposes. Sometimes the money is apportioned to districts whose financial condition is such as to make the provision of good buildings a hardship on the community. This form of distribution is usually called State aid for building purposes. In some States money is loaned to

school districts at a low rate of interest. In this way a continuing fund is provided to promote better rural school buildings.

(4) Through a plan commonly called standardization of school buildings, generally promoted by State departments of education through statutory provision or otherwise. School buildings meeting certain prescribed requirements may receive State aid or a plate or other mark of distinction.

In judging progress during a short period it must be remembered that many States have an excessive number of one-teacher buildings, hundreds, even thousands, of which are of the old box-car type. Even log cabins are not entirely obsolete. Twelve States have from 6,000 to 10,000 one-room schools. To modernize or replace all of these that need either is a gigantic task. A quotation from a letter from a State rural school supervisor described conditions in his State, which are not unlike those prevailing in others. He says:

Literally thousands of schoolhouses, shanties of the pioneer type of 50 years ago, have been torn down during the past six years. In their place are found modern school buildings constructed with proper regard to light, heat, ventilation, and the like. Great as has been the progress, there are yet very many buildings of the old type. In almost every county there are rural communities in which will be seen comfortable homes, commodious barns, improved highways, auto transportation, and telephone connection, but which permit the old shoe-box schoolhouse to mar the landscape—a clear case of suspended development.

The State Department of Idaho sends the encouraging report that all old buildings have been remodeled for correct lighting. In that State, schoolhouse plans must be approved by the State board of education. Other States reporting new laws or amendments to the old ones, with provisions for State inspection, are Michigan, Maine, Kentucky, and Washington. In the two former States, plans for new buildings, or extensive repairs, must be approved by the State superintendent. In Kentucky, county boards of education are required to submit plans to the State department for approval. In this State, the three State rural supervisors have enforced State regulations, and significant advancements have been attained during the past two years. In Washington, plans for schoolhouses must be approved by the county superintendent; plans for teachers' cottages and community buildings, by the State board of health.

Minnesota, South Dakota, West Virginia, Wyoming, and Texas report either an increase in the number of standardized schools, or an increase in the amount appropriated for State aid to rural districts for schoolhouse building during the biennium.

STATE COURSES OF STUDY.

In view of the importance of State courses of study to rural schools, it is gratifying to learn that there has been during the

biennium just closed increased attention given to them and their relation to rural life and adaptation to use in one-teacher and other small rural schools. Several States are now engaged in preparing State courses in which the effort is directed toward teaching the elementary subjects in their relations to the lives of rural children. North Carolina has arranged to try out and experiment with the course during the process of its formulation, so that changes may be made based on the results of experimentation with the outlines in rural schools under supervision before they are adopted as part of the accepted course. Illinois has for a decade or more published a course of study providing for alternation of grades in small schools, especially one and two teacher schools. During the past year there was issued from the State department a pamphlet designed to improve organization and instruction in these schools. Definite suggestions and directions are given to assist teachers to overcome the usual multiplicity of classes in one-teacher schools through grouping of grades and classes and adjustable recitation periods.

Among the other States which in their course of study provide for the organization of one-teacher schools on the four and five group method are New Jersey, Connecticut, Montana, and Wisconsin.

Wyoming reports the publication of its first course prepared especially for rural schools. Maryland reports a complete new course for rural schools based on a plan of class grouping. In Maine a course of study adapted to the needs of country children is in preparation. Michigan reports a new special course for rural schools with supplementary bulletins on special subjects. In Massachusetts a new course has just been prepared for the special needs of the rural schools. Kentucky is reorganizing both elementary and secondary State courses in an effort to adapt them more nearly to the needs of rural children. Texas reports "encouragement of a course correlated with home and farm interests." Virginia, South Dakota, Oklahoma, New Hampshire, Mississippi, Minnesota, Delaware, Alabama, Arizona, Colorado, Connecticut, and Oregon report either new or revised courses of study made or completed during the biennium. The Montana State course is based on alternation and combination of classes. Utah reports a uniform course of study throughout the "35 rural consolidated districts."

In all, 25 States reported to the Bureau of Education that some sort of concerted effort was made during the biennium toward improving and adapting State courses of study to the needs of rural schools.

CHAPTER VI.

EDUCATIONAL HYGIENE.

By WILLARD S. SMALL.

CONTENTS.—Introduction—School health supervision—Hygiene of the school plant—Physical education—Voluntary organizations.

The early history of educational hygiene was largely the history of "school hygiene." The name was accurately indicative of character—the hygiene of the school as an environment rather than as a *community of children* learning under the leadership of teachers to know and live health. Environment bulked large; the education of individuals for health, either personal or civic, was comparatively little thought of.

The most striking fact in the recent history of educational hygiene is the shifting of emphasis from control of passive environment to organization of active education in the interest of health. In the total mass of interest and effort in the field of educational hygiene the environmental factors are by no means neglected, but the outpourings of enthusiasm and money are now directed toward "health education." Faith in salvation by environment has shifted to faith in salvation by individual knowledge and effort. The pendulum perhaps has swung too far. It was a natural phase of war psychology that school instruction and training should be seized upon with almost fanatical frenzy as a solvent of many difficulties and a balm for many woes. It was easy to call upon teachers and pupils to enlist as soldiers for health; the response was certain because a compelling motive was appealed to. As a result, too heavy a burden, perhaps, has been laid upon children. In our enthusiasm for active education we may have neglected temporarily the importance of an adequate protective environment. This unbalance if it exists, will right itself, indeed is already righting itself, as is shown, for example, by recent reports of committees aiming to define the scope of educational hygiene,¹ the resurgence of interest in conservation of vision,² and in the programs of the child health demonstrations in Mansfield (Ohio) and elsewhere.³

¹Teacher means here what it means in statutes—not only class teachers, but supervisors, superintendents, etc.

²E. g., Report of committee of the American Public Health Association, p. 2, and report of committee of the National Child Health Council, p. 6.

³See p. 27.

⁴See p. 29.

The war, however, can not be given blanket credit (or blame) for this redistribution of interest and emphasis. Many movements and influences antedating the war had been working to modify the too large reliance upon the effects of environment. Among these, to mention only a few, were the rediscovery by a germ-obsessed world that individual resistance is a large factor in defeating the inroads of the communicable diseases; the "newer knowledge of nutrition," as well as the newer knowledge of the internal secretions and the newer knowledge of mental hygiene; the slowly evolving conception of physical education as organic education through fundamental activities essential to physical, social, and ethical adjustment; the massive thrusts of the playgrounds-recreation movement and the various amateur and semiprofessional athletic movements which tended to focus attention upon the vitalizing function of play in the life of both children and adults; and the activities of the Women's Christian Temperance Union through many years, which brought about the enactment of "temperance-physiology" legislation and made the teaching of physiology and hygiene mandatory in practically all of the States of the Union.

This survey does not attempt to cover the entire field of educational hygiene; rather it attempts to present the developments within the past four years in some parts of the field and to summarize the activities of some of the organizations and agencies that are working in this large, varied, complex, and rapidly developing field, within the same period.

SCHOOL HEALTH SUPERVISION.

It was shown in the Biennial Survey for 1918 that health supervision in the public schools had suffered during the period of the war. Since the close of the war substantial progress has been made in compensating for these losses. New laws have been enacted and old laws have been revised. The scope of school health supervision has been enlarged, and its significance is better understood. The data in the following sections on State legislation, supervision in city schools and supervision in rural schools, are taken mostly from an unpublished study of the status of school health supervision made by Dr. E. G. Salisbury in cooperation with the Bureau of Education.⁵

State legislation.—In 1915, 26 States had some form of legislation relative to school health supervision.⁶ At present 39 States have such laws. In several States the laws that existed in 1915 have been revised and improved. Two tendencies noted in the report of 1915 show progressive development in the legislation enacted in the intervening years. These are "the broadening of the scope of medical inspection into school health supervision" and "recognition of the education department as the logical administrative authority." The following

⁵ See also Bul. 110, U. S. Public Health Service, "Synopsis of Child Hygiene Laws."

⁶ Rept. Com. Educ., 1915, Vol. I, Ch. XVII, p. 419.

tabular summary of State legislation for school health supervision shows the date of enactment and the character of the law in each State with respect to certain important substantive and administrative provisions. The points covered in the tabulation are: (1) Nature of the law, mandatory or permissive; (2) laws of administration, both State and local, education authority or health authority or joint authority; (3) source of financial support, State or local;⁷ (4) agent designated to examine or inspect, physician, nurse, or teacher; (5) extent of the examination or inspection, full or partial;⁸ (6) whether reports are required to be made to parents or to board of education.

Summary of State school health supervision legislation.

Key to abbreviations. - Law mandatory (M) or permissive (P); administrative authority, education (E), health (H), or joint (J); financial support, State (S) or local (L); examination or inspection by physician (Ph), nurse (N), or teacher (T); extent of examination, full (F) or partial (Pt); reports made to parents (Pa) or board of education (B).

States.	Original act.	Nature of law.	Administration.		Financial support.	Examined by -	Extent of examination.	Reports required.
			State.	Local.				
Alabama	1919	M	J	J		Ph	F	
Arizona	1913	M		E		Ph		
Arkansas	1914	P		E				
California	1909	P	E	E	L	Ph, N		Pa, B
Colorado	1909	M		E		T	Pt	
Connecticut	1907	M, P	E	E		Ph, N		
Delaware	1919	P		E		Ph, N		
Florida	1915	M	H	H	S	Ph, N		
Georgia	1914	M	H	H				
Idaho	1913	M	J	E	L	Ph, N	F	Pa, B
Illinois	1916	P		E	L			
Indiana	1911	M, P	J	H	L	Ph, N	F	
Iowa	1919	P		E	L	N	F	
Kansas	1919	M		E				
Kentucky	1915		H			N		
Louisiana	1911	M				T		
Maine	1909	P	E	E	S, L	Ph, T	F	Pa, B
Maryland	1914	P	E	H	L	Ph, N	F	
Massachusetts	1906	M	J	E, H, c	S, L	Ph, N	F	Pa, B
Minnesota	1919	P		H, J	L	Ph, N	F	
Montana	1919	M		E, J	L	Ph, N	F	Pa, B
Nebraska	1919	M	H	E		Ph, T	Pt	Pa
Nevada	1917	M	H	E		T	Pt	Pa
New Hampshire	1913	P	E	E	S	Ph	F	
New Jersey	1909	M	L	E		Ph	F	B
New York	1910	M	E	E	S, L	Ph, N	F	Pa, B
North Carolina	1915	M	J	J	S, L	Ph, T	F	Pa, B
North Dakota	1919	P	C	E	L	Ph, N	F	Pa, B
Ohio	1912	P	J	T, H	L	Ph, N	F	Pa, B
Pennsylvania	1911	P	H	T, H	S, L	Ph, N	F	Pa, B
Rhode Island	1914	P	E	E	S, L	Ph, T	F	Pa, B
South Dakota		P		J	L	N, T		Pa, B
Utah	1917	M	E	E		Ph, N, T	F	Pa, B
Vermont	1917	P	E	E		Ph	F	
Virginia	1915	P	J	E	S, L	Ph, N	F	
Washington	1914	P		E		Ph	F	
West Virginia	1919	M, P		E		Ph, N	F	
Wisconsin	1919	M, P	J	J		Ph, N	F	
Wyoming	1915	M	E	E		T	Pt	

^a For sight, hearing, and breathing by teachers.

^b M for larger cities only.

^c Dental examination only.

^d Teachers required to examine eyes and ears only.

^e Option of local school board.

^f E in first, second, and third class districts, H in fourth class districts.

⁷ Local support is implied in every law authorizing medical inspection, even in those cases where it is not specified.

⁸ The distinction is between authority for complete examination and for partial examination; e. g., Alabama authorizes complete examination; Colorado authorizes examination only of eyes, ears, nose, and throat.

Health supervision in city schools.—In 1919 a simple inquiry was sent to the 2,395 cities with a population of 2,500 or more. The points covered were: Enrollment, total expenditures for school health work, source of funds, department administering, number of physicians (full time and part time), number of nurses, salaries of physicians and nurses, clinic facilities, and aid of voluntary organizations.

Replies were received from 1,595 (66.6 per cent). Of these, 1,117 (69.9 per cent) reported supervision by physicians or nurses or both.*

These city returns demonstrate wide variation among the States in the prevalence of school health supervision. In three States—Massachusetts, New York, and New Jersey—all of the cities that replied to the questionnaire reported employment of physicians or nurses or both—a score of 100 per cent. The three lowest scores were made by South Carolina (10 per cent) and Louisiana and New Mexico (14.3 per cent each.) The disparity is the more marked when it is shown that replies were received from 75 per cent of the cities in Massachusetts, New Jersey, and New York, and only 40 per cent, 27 per cent, and 10 per cent replied from South Carolina, Louisiana, and New Mexico. The median for the 48 States is 51 per cent.

Although there are in every State some cities maintaining health supervision, there is an obvious connection between the character of the law (or absence of law) and the extent of health supervision. Thus the laws in Massachusetts, New Jersey, and New York are mandatory; South Carolina and New Mexico have no laws on the subject; and the Louisiana law only requires that teachers make examinations of sight and hearing.

The following table shows two things: (1) The relative frequency of school health supervision according to size of cities; (2) relative frequency of the three types of administrative responsibility—education, health, joint.

Cities having health supervision—Authority in charge.

Pupil enrollment	Number reporting.			Per cent with supervision.	Authority in charge.					
	Total.	No supervision.	Supervision.		Education.		Health.		Joint.	
					Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
10,000 or more.....	78	000	78	100	44	56	20	26	14	18
5,000 9,999.....	96	5	91	95+	61	71+	7	7+	26	21+
3,000 4,999.....	132	11	121	92+	80	66+	15	12+	26	21+
2,000 2,999.....	221	41	160	72+	100	50+	15	8+	45	25
1,000 1,999.....	498	132	366	73+	209	57+	27	7+	130	36+
Under 1,000.....	497	196	301	61	158	52+	43	14+	100	33+

* Of the 221 reporting, 41 reported no supervision and 160 supervision by physicians or nurses; 20 reported supervision, but did not indicate satisfactorily that either physicians or nurses made the inspections.

* A similar inquiry in 1914 brought returns from 1,466 cities, of which 750 reported some form of health supervision. Rept. Com. of Educ., 1915, Vol. I, ch. XVII.

With respect to frequency of supervision, the table shows diminishing frequency from larger to smaller cities. In the group "enrollment 10,000 or more" all of the 78 cities report supervision by physicians or nurses, or both, whereas in the "under 1,000" group only 61 per cent report supervision of any kind.

With respect to frequency of the different types of administrative control the table shows that "education" is by far the most frequent in all groups of cities; "joint" administration is second in frequency; "health" is least frequent.

The following table shows a comparison of the three types of administration in cities of 10,000 or more with respect to—(1) Average annual expenditures per pupil for school health work; (2) average number of pupils per physician; (3) average number of pupils per nurse; and (4) per cent of cities having school clinics. The relative position of the three types of administration for each of these four items is shown by the percentages. The 100 per cent assigned to health is purely arbitrary; health is taken as the standard of comparison because it is the lowest in each of the four counts.¹⁰

Cost of supervision per pupil—Pupils to each physician and nurse—Per cent of cities having clinics.

Type of administration.	Cost per pupil.	Pupils per physician.	Pupils per nurse.	Per cent of cities having clinics.
Health	\$0.4547	5.618	4.135	50.5
Per cent	100	100	100	100
Education	\$0.578	4.964	3.075	84.5
Per cent	128.8	115.9	137.47	104.3
Joint	\$0.781	3.553	2.573	92.9
Per cent	172.2	158.07	115.7	115.4

Health supervision in rural schools.—The following series of questions, sent to the 3,458 county, union, and district schools units, brought 2,286 answers:

- (1) Does your county have a county school physician? A county school nurse?
- (2) Is the work of such physician or nurse under the control of the department of education? The department of health?
- (3) Does such physician or nurse work for the schools full time? Half time? One-fourth time? Less?
- (4) Is such physician or nurse paid from school funds? Health funds?
- (5) Is each pupil given a yearly physical examination? Is there an attempt to correct defects of sight? Hearing? Teeth? Throat? Also skeletal deformities? Are public clinics provided for the correction of defects? Is the treatment free?
- (6) Is provision made for sanitary inspection of school buildings and grounds, including water supply?

¹⁰ Cf. "Health Service in City Schools of the United States," a report, by the joint committee on health problem in education, based upon questionnaire returns from 340 cities, 1921.

Of the 2,286 units making reply, only 708, or 31 per cent, report any service by physicians or nurses (20 per cent of total number of such units). As compared with the city returns, employment of physicians or nurses is less than half as frequent in the rural areas. Of the 708 reporting units, 43 per cent report administrative control by health authorities, 39 per cent by school authorities, 13 per cent by voluntary organizations, and 4 per cent not specified. The work is financed out of school funds in 209 units, out of health funds in 215 units, and out of other funds in 210 units. In the majority of cases "other funds" means funds of voluntary organizations, of which the Red Cross is most frequently mentioned. It is interesting to note that in only 95 cases is the administration specified in the hands of a voluntary organization, whereas the funds are furnished by such organizations in 210 cases. The explanation of this discrepancy is that in many cases the funds are turned over to the school or health authorities to pay for services under control of these official agencies. As a matter of fact most school-health work has its origin in the voluntary organizations, and in the rural areas it is still very generally in this primitive stage of evolution. Indeed, in the smaller cities this is true; 567 cities reported aid from such auxiliary agencies.

The extent and thoroughness of the examinations is not revealed by the questionnaire, but sight is specified in 805 replies, hearing in 1,585, teeth in 806, throat in 740, and skeletal deformities in 101. Free treatment to an indeterminate extent is reported in 212 units and school clinics in 147.

From the fact that so many more units report examinations than physicians or nurses, it is obvious that in many cases the only health examination is that made by teachers. (E. g., the report from Colorado, which has a law requiring teachers to examine eyes and ears of school children, shows 11 counties with physicians and nurses, whereas 31 counties report physical examinations.)

In general it is evident that there is progressive diminution from the large cities down through all lesser population groups to the rural areas in all phases of school-health work and equally in the thoroughness and competency of such work.

A probable positive correlation between the character of the State law (or absence of law) and the extent of health supervision was shown above with respect to cities (supervision). The probable correlation is not so clear with respect to the rural areas. It is significant, however, that Minnesota, Iowa, and Wisconsin (States with county nurse laws) and New York, New Jersey, and Pennsylvania (States with mandatory medical inspection laws) have the highest scores. The States with no laws or weak laws generally show low scores.

HYGIENE OF THE SCHOOL PLANT.

It is now generally recognized by educational officials that there are some basic principles in the planning and construction of school plants, whether large or small, elementary or secondary, urban or rural. These may be summarized as the principles of adaptation to uses (or functional adaptation), safety, hygiene, economy, and esthetic fitness. These principles determine not only the planning and construction of the school plant as a whole; they are also operative in the planning and handling of all important details. Obviously these principles can not be safely expressed as immutable formulæ or standards. Every school plant is an individual problem, and the application of these principles will vary in accordance with specific needs and policies. Study of successful practice in schoolhouse planning, as well as the recent literature of the subject, leaves no ground for doubt that the principles enumerated are vital to good planning and construction. Hygiene, for example, is the dominant principle in respect to lighting, ventilation, toilet facilities and water supply, as safety is the dominant principle in respect to heating, entrances and exits, corridors and stairways. The other principles in these instances are accessory or modifying influences.

The report on High School Buildings and Grounds of the Commission on the Reorganization of Secondary Education¹¹ illustrates satisfactorily the implications and applications of this principle. The commission, in its report on the Cardinal Principles of Secondary Education,¹² set up health as one of the seven main objectives of education. This report on High School Buildings and Grounds is in harmony with the earlier statement of objectives. It recognizes that the school plant is an important influence for or against health; from a preventive or protective point of view, by providing a hygienic environment; from a positive or constructive point of view, by providing facilities for active physical education.

It might be assumed that school lighting and school ventilation are so standardized that they are no longer live issues. There is comparatively little of new scientific data upon either lighting or ventilation, but unanimity of opinion is still lacking. This can only mean that some of the fundamental scientific determinations are yet to be made. The present status of enlightened opinion with respect to these two important aspects of schoolhouse construction is about as follows:

Eye hygiene and schoolhouse lighting.—There is comparatively little advance either in knowledge of the actual conditions of eyesight among school children or in the principles of school lighting since the publication of Berkowitz's *Eyesight of School Children* (Bu. of Educ.

¹¹ Bul. Bu. of Educ. 1922, No. 23.

¹² Ibid, 1918, No. 35.

Bul., 1919, No. 65). The organization of the Eyesight Conservation Council of America and the enlarged activities of the National Committee for the Prevention of Blindness have increased the amount of effective propaganda for better eye hygiene in the schools as well as in industry and in the home, but no important additions of fact have been made. (See p. 27 for summary of activities of these organizations.) Perhaps the most significant advance in school lighting is the recognition that the problem is not solved by the formulae "light should come from one side only, the left side," and "the window space should be one-fourth of the floor space." It is beginning to be understood that the lighting of a school building, like most problems of construction and equipment, is generally an individual problem and must be given individual study. This is recognized in the section on lighting in the report cited above, and in the report of the National Child Health Council on school health work.¹¹ It is more fully recognized and exploited in the report of the subcommittee on school lighting of the joint committee on health problems in education published in *School Life*, May 1, 1921 (Vol. VI, No. 9). This report also takes issue with the unilateral lighting dogma. The "few and simple essentials for good daylight illumination" are given as follows:

1. The selection of a site and plans such that neighboring trees or buildings shall in no case rise more than 15° above the horizontal plane of the bottom of the windows. Large trees, so close to the walls that they can be trimmed up to clear an angle of 60° with the horizon, may be permitted in warm climates, where it is important to keep down heat.

2. Placing the windows high enough to permit light from them to fall at an angle of 15° to 40° in the part of the room most distant from them, shutting off all glare of light below 15° , and placing such windows on all sides of the room available, and especially to the south, where the most light is obtainable.

3. Controlling direct sunlight by light shades that will intercept and diffuse it, and drawn out of the way when not needed for this purpose. Placing all dark shades at the bottom of the window, and drawing them up only as needed to raise the level below which glare is excluded from the eyes. Using polished shutters that swing on a horizontal axis to reflect light on the ceiling when obstructions to clear sky render this help necessary.

Ventilation.—The biennial survey of educational hygiene for 1916 included a summary of the investigations of the New York ventilation commission and a tentative conclusion as follows:

Good air is cool air, not over 68° F.; it is moist air with at least 50 per cent relative humidity; it is air in motion, free from dust, bacteria, and odors. The chief problems in ventilation are maintaining at the normal level the body temperature, the elimination of dust as the vehicle of bacteria, and the keeping of indoor humidity somewhere near the outdoor humidity.

Since that time there have been no important advances in knowledge of "good air." Winslow's statement quoted in Park's Public

¹¹ Bu. of Educ., School Health Studies, No. 1, 1922.

Health and Hygiene (1920), practically the same as that quoted above, is as follows:

The air should be cool but not too cold; the air should be in gentle but not excessive motion and its temperature should fluctuate slightly from moment to moment the air should be free from offensive body odors; the air should be free from poisonous and offensive fumes and large amounts of dust. The chief problems of ventilation are those of making the mechanical adjustments so that good air may be "served" to indoor spaces.

An admirable review of "What Fifty Years Have Done for Ventilation" is given by Dr. G. T. Palmer in "A Half Century of Public Health," the memorial volume published by the American Public Health Association in 1921. As applied to schools, the conclusions are as follows:

In schools which are mechanically ventilated we must discard the 30 cubic feet standard and also give up the idea that it is necessary to send air to every point in the room. The extremists, in 1870, wished to flush a room as a body of policemen would clear a hall, pushing all before them. This was ventilation by displacement. We now ventilate by dilution. It would seem that still better results could be accomplished in schools and auditoriums by substituting surface skimming in place of flushing. We must also substitute the intermittent or ejector type of air flow for the monotonous uniformity which now characterizes mechanical ventilation. This will mean changing the inlet register from its accustomed place on the inner wall to the space between the direct radiation and the outer wall. The course of air flow will be upward across the upper levels of the rooms and down the inner wall to the outlet. Windows may then be opened with impunity, the mechanical air flow creating an aspirating effect which will draw in the cold outside air and send it over the room. By this means we shall harmonize the conflicting interests of the teacher who wants the window open and the janitor who wants it kept closed.

The occupants of the room, it is true, will not be uniformly perfused. At times they will sit in an atmosphere higher in CO₂ than under the old arrangement, but they will not sit in direct drafts of unvarying air currents, and consequently they can stand lower temperature. It is almost impossible in many fan-ventilated school-rooms to secure comfort at 68° F. temperature because of the appreciable air flow through the room, which cools by convection and evaporation; 70° and even 72° are more comfortable. Direct the circulating air over the upper portions of the room and temperatures of 68° F. and even 65° F. are not uncomfortable. Dryness will not be noticed with overhead air circulation. Air from the windows will aid in giving a pulsating or fluctuating motion to the mechanically propelled air stream, which will be both pleasant and stimulating.

PHYSICAL EDUCATION.

During the past half century there have been many "movements" each expressing one or more of the elements composing a comprehensive modern program of physical education (which includes, of course, health training). Some are indigenous; some are transplanted from foreign fields. Swedish gymnastics, German turnverein, and Bohemian Sokol are easily identified. College athletics originated in England. "School hygiene" was born in Germany. The kindergarten is also of German parentage. Its relation to physical educa-

tion may not be obvious, but Froebel's principle of education through self-activity is more reaching than is generally recognized. The Boy Scouts may be regarded as English in origin, but there is no doubt about the pure Americanism of the Young Men's Christian Association and Young Women's Christian Association activities, and the playgrounds movement. Numerous national athletic organizations for the promotion and control of athletics have grown up. Most of these athletic organizations have been concerned with athletics as recreation for the older adolescents and adults, not as physical education for growing boys and girls. On the other hand, the playground movement, the Boy Scouts, the Girl Scouts, and others, as well as the institutional organization of physical training activities in the schools, have been concerned primarily, in their physical activities, with the physical education of boys and girls during the period of growth.

Out of these and other movements concerned with the physical activity life of boys and girls is emerging slowly an understanding of the true nature and importance of physical education as part of the organized program of public education.

Physical education legislation.—The first State physical education law was enacted in Ohio, 1901, largely through the initiative of the Women's Christian Temperance Union. Twenty-eight States now have physical education laws. These are of varying degrees of effectiveness—a few broad and strong, some so weak as to be of little effect. Twelve States have State supervisors of physical education, under the State departments of education. In most of the laws health instruction and training are specified as part of the program of physical education. (In Utah the designation is health education.)¹⁴ Seventeen of these laws have been enacted since 1917.¹⁵

Expenditures for physical education.—There are no statistics that are even approximately accurate of the expenditures for physical education throughout the Nation. An attempt was made in 1921 by the Bureau of Education to secure data from the State departments of education relative to the expenditures in the several States for "teachers and supervisors of physical education including school health supervisors and nurses," for the year 1920; also estimates for the "year 1922 and for ultimate expenditures to insure adequate and effective program of physical education." Replies were received from 32 States. Of these, 10 stated that the State office had no statistics of actual expenditures and no data upon which to base estimates of future expenditures. Thirty-two States, with an aggregate population of 69,641,172, gave information of more or less value. Of these 32 States, 10, representing an aggregate population of 23,944,084,

¹⁴ For summary of State laws see "Recent State Legislation for Physical Education," Bul. Bu. of Educ., 1922, No. 1.

¹⁵ For promotion of legislation by the National Physical Education Service, see p. 21.

returned replies showing that the expenditures reported for 1920 were based upon official records and their estimates for future expenditures were based upon plans at least partly formed. These 10 States represent a little more than one-fifth of our total population; they are widely distributed geographically; they vary greatly in economic character, in educational tradition, and in present educational status. With two or three exceptions, they are the States in which State-wide supervision has made the most progress and in which the largest expenditures are now made for physical education. Following is a tabular summary of the returns from these 10 States, arranged according to object of expenditure and amount of expenditure, present year estimate for immediate future and estimate for ultimate future needs.

Expenditures for supervision.

Object.	1920	1922	Ultimate need.
Teacher training.....			
Payment of supervisors and teachers.....	\$311,755	\$490,850	\$1,081,250
State administration.....	606,937	8,188,909	11,988,700
	60,700	180,880	271,680
Total.....	1,388,392	9,000,639	13,341,630

If these figures could be taken as representative of actual expenditures throughout the country in 1920, then the expenditures of the country as a whole would be about \$20,000,000. These 10 States, however, are not fairly representative, as they are the leaders in organization and expenditures. Total expenditures for the country probably do not exceed \$12,000,000 at the outside.

The estimates for needed future expenditures are probably as accurate as any such prophecy is likely to be. On the basis of these estimates for the 10 States, the expenditures for the entire country for 1922 should be about \$40,000,000, and a little more than \$60,000,000 ultimately. Such an estimate for 1922 was fallacious. That amount of money could not have been spent economically and effectively. Lack of competent personnel alone would have prevented it.

The estimate of ultimate economical and effective expenditure of \$60,000,000 is conservative, on the basis of present population. On that basis the country is not spending more than one-fifth of what should be spent for this essential educational service.

Physical education in the cities, as illustrated in Detroit.—Many of our cities have developed impressive programs of physical education during the past decade. It would be invidious to mention Detroit but for the fact that the Detroit school system is one of the outstanding laboratories of educational experimentation. The department of physical education in Detroit in 1920 changed its name to

the department of health education. It is administered as a division of the department of instruction, teacher training, and educational research.

The program is characterized by boldness of conception, definite educational purpose, unusually adequate facilities, and the experimental attitude on the part both of those immediately in charge and also of the administrative directors. The aim of the coordinated department activities is to "give the child increased physical ability, to insure normal growth, to avoid accidents, to decrease illness, to overcome defects, and to make possible an abundance of energy and vitality." Achievement of these aims is sought by "acquainting each child, through experiences, reading, and observation, with the basic elements of health and instilling in him an inner urge to do those things necessary to a healthful life."

All of the department activities aim to educate the child not only to care for his personal health but also to give him the abilities, both physical and social, needed for cooperation in the solution of community and national health problems. The activities employed are grouped as follows: (1) Plays, games, dancing, gymnastics, and swimming; (2) competitive athletics; (3) health instruction; (4) Boy Scouting.

Provision is made in the school schedule in all grades from lowest to highest for from 30 to 60 minutes a day—depending on age of pupils and type of school—of active exercise under trained teachers. The character of the exercise likewise depends upon the age, physical ability, and normal interests of the children. Sex differentiations in interest and ability are observed. Special provision is made for children with defects more marked than with the average child. These children are discovered through the medical examinations conducted by the city health department, through observations made by the regular teachers, and the more detailed observations of the trained teachers of individual gymnastics. Six types of defectives are given special assistance through instruction and advice: Those with poor posture—to lay a better foundation for future health; with infantile paralysis sequelæ—to prevent increase of deformity; with postural scoliosis—to direct attention to proper orthopedic treatment; with cardiac weakness—to strengthen the heart by carefully supervised work and play during early stages of disorder and to aid in resisting further progress of disease; with weak and fallen arches—to prepare for future efficiency.

Competitive athletics, for both boys and girls, extends from the sixth grade through college. The dominant aim is to provide an outlet for the natural surplus energy of children and to direct that energy into constructive channels.

A tentative course of study in health has been prepared and is being tried out in a limited number of schools. The course is organized around six leading ideas: Normal growth, physical ability, illness, safety, defects, energy, and vitality. Each of these leading ideas or motives is presented in its relation to and dependence upon nine contributing factors: Food, rest, air, exercise, cleanliness, clothing, posture, leisure time, state of mind.

The Detroit public school system is the first in the United States to employ a field scout executive. He is a member of the health education department and administratively responsible to that department, but is under direct supervision of the Detroit scout executive. After 15 months of operation, 28 school troops having about 600 scouts and 150 active volunteer male adult leaders are supervised by the field scout executive. All general contacts between the Detroit schools and the 4,000 Detroit Scouts are handled through this office.

Closely related to the department of health education is the work in "safety education," which seeks to educate children in the principles and practice of accident prevention.¹⁶

Physical education and physical fitness.—The immediate results of most educational procedures can be tested and measured with some degree of precision. This is true of physical education both in its physical activity aspect and in its health training aspect. The permanent effects of education are not easily measurable in the body politic of adult society. We should like to know whether our faith that physical education does produce results in increased physical fitness is justified. Doubtless it depends upon what and how much is administered.

Comparisons are traditionally odious. At least they are hazardous. This is especially true of statistical comparisons relating to physical efficiency. The following is no exception to the rule. In view of the fact, however, that systematic physical education has been universal in the Swedish schools for many years, it may be worth while to venture one or two comparisons with conditions in our own country, even though more complete knowledge of the facts should show these comparisons to be inaccurate or even groundless.

(I) Physical examination of 35,000 young men of military age (21 years) in 1918 in Sweden resulted in the rejection of only 14 per cent. Our initial draft examinations resulted in the complete rejection of about 16 per cent of those drafted. The partial rejection amounted to more than twice as many. It would be well worth knowing whether this apparent difference is a real difference in physical fitness or merely a difference in standards and methods of procedure. If

*St. Louis is another city school system that is strong in safety education.

the differences are real, are they due to physical education or to other causes?

(2) In 1918 the physical examination of all high-school pupils of Sweden (ages 9 to 18) gave the following results in regard to body development: Very good, 76.7 per cent; good, 19.9 per cent; poor, 3.4 per cent.¹⁷ There are no statistics in the United States that are satisfactorily comparable with these Swedish statistics, but the results of the examinations of Harvard freshmen with respect to "bodily mechanics" offer material for a possible comparison. Probably bodily development and bodily mechanics do not mean exactly the same thing, but they are closely allied. The Harvard reports¹⁸ show that "only 20 per cent of the freshmen at entrance use their bodies well, while 35 per cent use their bodies very badly." This would seem to indicate that the Harvard freshmen are distinctly inferior to the Swedish high-school pupils with respect to ability to use their bodies. Physical training is universal and compulsory in the Swedish secondary schools (gymnasia 9 to 18 years of age); it is by no means universal and compulsory in the secondary schools from which Harvard freshmen are drawn. If "bodily development" and "bodily mechanics" do mean entirely different things, there is at least a probability that there is a causal relation between the physical training and the superior bodily development of the Swedish youth. This probability is strengthened by the fact that with respect to organic soundness (i.e., freedom from disease or disability likely to be permanent) the Harvard freshmen are superior.

The figures are, respectively: Harvard students 95 per cent satisfactory and 5 per cent unsatisfactory; Swedish high-school boys 89.2 per cent satisfactory and 10.8 per cent unsatisfactory. It is unlikely that the Harvard standards are inferior to those governing the Swedish examinations. On the other hand, it is highly probable that Harvard freshmen, as a class, have had good medical care from birth. Apparently the Harvard students are better organically, even though they are inferior mechanically. Which are the fitter, i.e., which will live longer and bear up more buoyantly, "under the slings and arrows of outrageous fortune?"

The two obvious and certain conclusions are that "bodily soundness" and "bodily development" are equally necessary objectives of physical education, and that the possession of the one is not a guaranty of the possession of the other.

¹⁷See hearing before the Committee on Education, House of Representatives, 66th Cong., 3d sess., in H. R. 12652, Part 2, Feb. 8, 1921, p. 123 ff.

¹⁸Similar figures are reported by the Harvard department of hygiene for a number of years.

VOLUNTARY ORGANIZATIONS.

Different types of voluntary organizations influence educational hygiene in different and various ways. A rigorously accurate classification of such organizations is not possible, as some of them function in more than one way. The following classification, however, shows approximately the character of the organizations and the way in which they are related to and influence educational hygiene:

(1) Organizations the membership of which consists in whole or in part of children and adolescents and which includes in the general program of activities a more or less specific program of health activities, such as Boy Scouts, Girl Scouts, Camp-fire Girls, Young Men's Christian Association and Young Women's Christian Association, and Junior Red Cross.

(2) Organizations to promote programs of health instruction and training in the schools and other organizations that control children, such as the Child Health Organization of America,¹⁹ the Modern Health Crusade of the National Tuberculosis Association, the Playground and Recreation Association.

(3) Professional organizations which directly or indirectly influence the standards and practices in the field of educational hygiene, such as the American Public Health Association, National Organization of Public Health Nursing, American Physical Health Association, American Medical Association.²⁰

(4) Organizations for the promotion and study of special fields in hygiene, such as the American Social Hygiene Association,²¹ National Committee for Mental Hygiene, National Committee for Prevention of Blindness.

(5) Operating organizations which carry on investigations, demonstrations, etc., either with their own funds or as supplied by other organizations, such as the Elizabeth McCormick Memorial Fund, National Child Health Council.

(6) Foundations which generally are nonoperative but supply funds for research, demonstration, and promotion through other existing organizations, such as the Rockefeller, Commonwealth, Milbank.

(7) Organizations devoted in whole or in part to promotion of child welfare through creation of public opinion, promotion of legislation, and other means, e. g., National Child Labor Committee, National Congress of Mothers and Parent Teacher Associations, Women's Christian Temperance Union, National Physical Education Service.

The list of illustrations cited is not exhaustive, even of the organizations national in scope. Sectional and local organizations are not

¹⁹ Now combined with the American Child Hygiene Association under the name of American Child Health Association.

²⁰ Especially through the joint committee of American Medical Association and National Education Association on Health Problems in Education.

²¹ See section on education and social hygiene, p. 22.

mentioned. The number of these is large, and many are very influential. Furthermore, the classification might be extended to include a variety of other kinds of organizations, some of which exert much influence, e. g., insurance companies, commercial organizations, labor unions.

Summaries of the recent activities of 21 voluntary organizations in the general field of educational hygiene and their contributions thereto follow. This list does not necessarily include all the organizations that have made important contributions. Selection has been determined in large measure by definiteness and concreteness of the activities and contributions. It is probable that a good many other organizations have contributed very effectively though less obviously.

Boy Scouts.—The enrollment of Boy Scouts in 1922 was 421,865. The educational program includes instruction and practice in both preventive and curative measures, personal and public health and first aid. Beyond the indirect influence of the scout's oath to keep himself "physically strong, mentally awake, and morally straight," and the eleventh law to keep "clean in body and thought, stand for clean speech, clean sport, clean habits, and travel with a clean crowd," scouting bears a direct influence on educational hygiene through its requirements for promotion to second class and first class scouts and the award of merit badges.

Of the 48 merit badges offered, 16 are for physical and health achievements, such as athletics, camping, cycling, first aid, horsemanship, pathfinding, personal health, physical development, public health, stalking, and swimming. These require a daily practice of hygienic habits, care of teeth, proper diet, use of bath, knowledge of the effect of alcohol and tobacco on the growing boy, value of medical examination, and healthful games.

The merit badge for public health requires knowledge of (1) the chief causes and modes of transmission of such diseases as tuberculosis, typhoid, and malaria; (2) the disease-spreading house fly; (3) proper disposal of garbage; (4) how cities should protect milk, water, and meat supply; (5) the sanitary care of a camp, and the candidate must produce satisfactory evidence of having given active cooperation to health authorities to prevent diseases. Boy Scouts are active leaders in the annual spring clean-up put on by public schools of Chicago and other cities.

First aid, both elementary and advanced, is required of scouts passing both second-class and first-class tests. Elementary first aid includes treatment of injuries, fainting, shock, fractures, bruises, sprains, burns, scalds, carrying injured, and the use of bandages. Advanced first aid covers methods of panic prevention; what to do in case of fire, ice, electric, and gas accidents; what to do for mad dog

and snake bites; treatment of dislocations, poisoning, fainting, apoplexy, sunstroke, heat exhaustion, and freezing; treatment of sunburn, ivy poisoning, bites, stings, nosebleed, earache, toothache, grit in eye, cramp, chills; and demonstration of artificial respiration.

We must also consider the health value of life out of doors for 421,865 Boy Scouts. In the State of New Jersey 15 minutes a week credit under the physical training law is given for outside activities, among which is mentioned scouting. New York State in its physical training law also recognizes scouting among its important outside activities.²²

The American Red Cross.—The American Red Cross is not concerned directly with educational hygiene or school health work. Indirectly however, it makes continuous and important contributions.

The Mansfield, Ohio, child health demonstration of the National Child Health Council is financed by the Red Cross. (See Child Health Council.)

The regular activities of the Red Cross that bear on school health work are as follows:

(1) Much of the work of the 1,140²³ public health nurses maintained by the American Red Cross throughout the United States deals with health education. In many communities the only health work carried on in the schools is done by the Red Cross nurses.

(2) Women and girls (numbering 93,443) have been trained in Red Cross classes in home hygiene and care of the sick. A majority of these classes have been carried on in high schools and normal schools.

(3) Certificates in first aid (5,705) have been awarded to persons who have been trained by the American Red Cross. Many of these are high and normal school students.

(4) Classes in nutrition (4,636) have been held, with an enrollment of 102,116, the majority in connection with schools.

(5) Health lectures, health exhibits, classes, and clinics have been conducted in the 377 health centers in which the American Red Cross has been interested. School children have benefited in all cases.

In addition to the activities mentioned above, the Junior Red Cross is interested in good health in the schools and cooperates with official and voluntary agencies to bring this about.²⁴

The Child Health Organization of America began life in 1918 as the "Child Health Organization" under the auspices of the National Child Labor Committee. The bud grew so rapidly that it soon broke off from the parent stem. It was incorporated under its present name in January, 1921. In the past two years it has made large gains in "height" and "weight," due in large measure to the constantly

²² See p. 13 for integration of Boy Scouts in the health education program of Detroit public schools.

²³ The figures in this and succeeding paragraphs are for 1921-22.

²⁴ For the work of the Junior Red Cross in establishing a children's hospital in cooperation with the public schools of Spokane, Wash., see Proc. of Am. Sch. Hygiene Assoc., 1921.

increasing interest in health education throughout the country.²⁸ The activities and interests are varied, as shown by the following samples:

(1) It has demonstrated the value of dramatic methods in teaching health through the success of its dramatic characters. During 1921 "Cho-Cho," the "Jolly Jester," and "Happy" gave 965 performances to over half a million children. "The Health Fairy" has given demonstration performances and held conferences with teachers throughout several States. Her experiences in California are typical. There she visited 56 cities under direction of the State board of health, gave 66 demonstrations, 61 conferences, and met over 72,000 persons.

Two new dramatic characters have been created. One known as "Joy" demonstrates to teachers how health plays may be put on as classroom games, with only three rehearsals; and "Happy" has developed the rôle of "Professor" Happy, in which character he delivers a lecture to high-school students.

As a result of increased interest in health education in California, a staff representative of the Child Health Organization is now employed in California, and finances come jointly from the State and the San Francisco Tuberculosis Association.

(2) The new publications of the Child Health Organization for 1921-22 include "My Health Book" for high-school girls; "Happy's (Health) Calendar"; "The Nutrition Class"; four health plays dramatizing stories from "Cho-Cho" and the "Health Fairy"; "Miss Jenkins's Sketch Book," a painting book for children; "Many Roads to Health," a facsimile reproduction of a class health book; "The Value of Weighing School Children," and others. During 1922 an arrangement was made with one of the large publishing companies by which some of its books for children are now distributed by that company, and two new books have been published: "Every Child's Book" and "Food and Health and Growth." Within the same period it has prepared, in cooperation with the Bureau of Education for publication by the bureau, three pamphlets: "Your opportunity in the schools," "Suggestions for a program for health training for elementary schools," and "Milk."

(3) At the invitation of the president of the Child Health Organization a group of experts met in conference in 1921 to consider a revision of the standards of weight and height of children. From the conference a national committee was formed of representatives from various organizations. The committee will soon issue a report on its findings.

(4) The Child Health Organization conducts an increasingly large correspondence with educators and health workers in all parts of the

²⁸In November, 1922, the Child Health Organization and the American Child Hygiene Association were merged into a single "American Child Health Association."

world. From January, 1921, through August, 1922, 38,785 letters were received, 42,992 letters were sent, and 3,023 conferences were held with visitors at the office.

(5) An international exchange of health posters made by school children has been established.

Mohonk Health Education Conference. - This conference, held under the joint auspices of the Bureau of Education and the Child Health Organization of America at Lake Mohonk, June 26-July 1, 1922, brought together about 100 persons who had each something to contribute to the solution of the many problems involved in "Health Education and the Preparation of Teachers."²⁸ The membership of the conference included pediatricians, nutrition specialists, school health supervisors, hygienists, physical education specialists, public health and school nurses, superintendents of schools, college and normal-school teachers, public-school teachers, representatives of voluntary health organizations, and others. The work of the conference was carried on through general sessions for discussion and special committee activities, both of which were concerned with the following topics:

Subject matter in health education; place of health education in the curriculum; incentives and motives in health education; the promotion of health habits, successes and failures; and the preparation of teachers for health education.

The results of the conference discussions and deliberations were precipitated in a brief statement of recommendations as follows:

1. RECOMMENDATIONS REGARDING CONTENT AND METHOD.

(1) *Kindergarten through fourth grade:* That here primary emphasis should be laid upon habit formation, in a healthful school environment. Health principles should be emphasized in relation to actual situations and in the project work in these grades.

(2) *In the fifth and sixth grades* the basis should be more broadly biological and should convey a conception of the functions of the body as a whole, although the content of the course should still be correlated with health habits and practices.

(3) *In the junior and senior high schools*, while continuing the effort to fix the habits and broaden the knowledge indicated for previous grades, problems arising from group activities offered in the school, home, and community should be stressed. In these grades the dominant idea should be service.

2. RECOMMENDATIONS REGARDING HEALTH EDUCATION FOR TEACHERS IN TRAINING.

(1) *Health education in a training school* should include three factors: (a) A student health service; (b) healthful surroundings; (c) content course or courses.

(2) *Student health service:* The Student Health Service should include: (a) A complete health examination and such subsequent examinations as may be necessary. (b) Health advice and supervision of students throughout the course. (c) The correction of remediable health defects. (d) The maintenance of a healthful regimen of living. "Healthful living" shall be understood to include proper hours

²⁸Complete report published by the Child Health Organization, 1922.

of sleep, proper food, clothing, bathing, and exercise. (c) As far as practicable, the student's attitude and conduct in regard to the above points shall be a basis for recommendation for a professional position.

(3) *Healthful surroundings*: The administration of teacher-training schools should make provision for supervision and control of the living and working conditions of students, whether the students live in dormitories or elsewhere.

(4) *Content*: The following subject matter topics are suggested, in order that teachers may have an appreciation of community health work and may do their part in health instruction to the best advantage. It is important that there be adaptation of these principles to the problems of urban and rural schools, and it is further suggested that the best practicable distribution of time and relative emphasis be given these topics according to local conditions.

The fundamental subject matter should be derived from the following fields.

(a) Personal hygiene; (b) nutrition; (c) community hygiene; (d) social hygiene; (e) mental hygiene; (f) health and care of infants and young children; (g) health of childhood and adolescence; (h) first aid and safety; (i) hygiene of the worker; (j) home nursing and care of the sick; (k) school hygiene; (l) physical education; (m) principles of health education and practice teaching. Practice teaching to include all types of contact with children incident to health work in the school.

(5) *The preparation for the course in health education*: The subject matter fundamental to the above course or courses in health education should include general principles of applied chemistry, applied physiology, applied psychology, applied bacteriology, to be taught in the normal school, if adequate work in same has not already been done in high school.

National Tuberculosis Association (Modern Health Crusade).—The National Tuberculosis Association is the pioneer propaganda health association of America. During its 18 years of activity it has used extensively and systematically about all of the methods and devices devised by the publicity and advertising fraternity for "educating" the public, including newspaper publicity, the printed word other than newspaper publicity, the spoken word and graphic and display methods, such as motion pictures, exhibits, and various dramatic devices. The aim was enlightenment of the general public, primarily the adult public. Early, however, it was perceived that valuable as might be the results of "broadcasting" to the adult public, more valuable probably would be the results of direct instruction of school children. At the least, this would be a powerful supplement. The first efforts in this line were merely adaptations of the methods already employed in the propaganda efforts, especially talks to school, literature devised for school children, and graphic devices.

Recognizing the relative ineffectiveness of casual incursions of propaganda methods and material into the schools, the association in 1916 began experimenting with a plan designed to stimulate and encourage children to practice health habits. The *Modern Health Crusade* is the result. The central feature is the chore record, a list of 11 health tests or chores to be performed daily and recorded systematically. It has sought to marry the psychology of habit formation to the quest of health as a romantic adventure. The factors

of play, romance, and competition stimulate interest in a study that otherwise is likely to be prosaic and monotonous.

The results are not entirely easy to summarize or evaluate. Numerically it is certain that millions of children of all grades and in all parts of the country have "enlisted as crusaders." In 17 States the crusade program has been adopted, or strongly recommended, by the State education departments as an integral part of the health instruction in the State schools. The Ohio State course of study in hygiene, published 1921 by the State department, has the crusade for its foundation. A number of other State departments and a larger number of city departments of education have drawn liberally from the crusade in their manuals for teachers.

The 1922-23 edition of crusade material includes graded sets of chores for the third, fourth, fifth, and sixth grades, and also a nutrition edition designed for use by underweight children. This exemplifies the purpose of the directors of the crusade to modify and develop the program in accordance with realities.

The tendency of school departments, State and city, to adapt the crusade material and methods to broad programs of health teaching, to select and incorporate appropriate parts of the crusade program, is testimony to the vitality and probable permanence of this invasion of the schools by an extramural friend and coworker.

National Physical Education Service.—This organization was established in 1918 as a special service of the Playground and Recreation Association of America for purpose of promoting physical education legislation, State and National. At the time it was established there were 11 States having physical education laws. Since that date 17 others have enacted physical education legislation—8 in 1919, 4 in 1920, 5 in 1921. In all of these States the National Physical Education Service has given substantial aid in bringing the legislation about, by furnishing drafts of bills and information necessary for perfecting bills in process of enactment and also material for publicity and by personal service of field representatives. In these States and other States the Physical Education Service has also done a large amount of preliminary publicity and organization work preparatory to the legislative campaigns. In 1921 legislative campaigns were conducted in 8 States where the bills failed of enactment. The ground was broken and cultivated to such an extent, however, that success is confidently expected in the next biennial session (1923).

In addition to aiding in the promotion of new legislation, the Physical Education Service has rendered effective assistance in several States in defending existing legislation against economy threats in the legislatures.

* The compulsion of these laws has been a stimulus to thousands of educators to develop better content and methods of instruction in this field.

Another important and growing function of the Physical Education Service in States where legislation has been enacted is that of stimulating the educational authorities to develop and strengthen the physical education programs authorized under the laws. It was recognized when the establishment of the Physical Education Service was undergoing incubation that the enactment of a law was only the first step in securing an effective state-wide operating program of physical education, and it was foreseen, therefore, that this stimulative function would become progressively more important. Coincidentally with this service is the equally important and more necessary service of building up popular appreciation and support. To that end the Service works through many other organizations, furnishing them with information and suggestions for effective activity.

The Physical Education Service has carried on a continuous, persistent, and cumulative campaign for Federal legislation since the original Fess-Capper bill proposing Federal leadership and encouragement to States was introduced in 1920. Extensive hearings were held before the Senate Committee on Education and Labor in May, 1920, and before the House Committee on Education in February, 1921. Indorsement of the idea of Federal encouragement to physical education was given by both the presidential candidates in the campaign of 1920 and express indorsement was given in the Republican platform. In April, 1921, the Fess-Capper bill (H. R. 22 and S. 416), revised to overcome a number of reasonable objections, was reintroduced. In the administration plan for reorganization of Government departments provision is made for enlarged recognition and support of physical education in the proposed reorganization of the Bureau of Education.

PROFESSIONAL ORGANIZATIONS PROMOTING HEALTH.

The American Public Health Association has a standing committee on school health program. The latest report of this committee (1921) set forth the fundamental requirements of a modern school health program, grouping them as follows:

I. Health Protection.—(a) Sanitation of the school plant; (b) examination, (1) physical, (2) psychological; (c) communicable disease control.

II. Correction of Defects.—(a) Special classes; (b) clinics; (c) follow up.

III. Health Promotion.—(a) Hygienic arrangement of the daily program; (b) physical activities; (c) health instruction and motivation for teacher, pupils, and parents.

This report seeks to fix a standard terminology and to specify the activities that logically can be carried on in a school health program.²²

Committee on Health Problems in Education.—This committee was established in 1911 as a joint committee of the Council of Education

²² Am. Jour. Pub. Health, March, 1922.

and the American Medical Association. In 1921, after 10 years of useful activity, it was formally established as a permanent committee of the National Education Association. Throughout these years there has been effective cooperation with the Bureau of Education, especially in the matter of publication and distribution of reports in the earlier part of the period. The earlier studies produced by this committee have been reviewed in former Biennial Surveys: "Rural Schoolhouses and Grounds"; "Minimum Health Requirements of Rural Schools"; "Health Essentials for Rural School Children"; "Health Chart Report"; and "Health Chart Series." The recent activities of the committee may be summarized as follows:

I. Studies completed and published:

(1) A pamphlet entitled "The Teacher's Part in Social Hygiene" has been prepared in cooperation with the American Social Hygiene Association and published by that association (1921).

(2) "Health Improvement in Rural Schools" completes the introductory plan of the committee for promoting a complete health program in rural schools (1922).

(3) "Health Service in City Schools of the United States" is a careful summary of the equally careful questionnaire reports from 340 city school systems on current organization, methods of work, and accomplishments in school health work (1922).

(4) "Daylight in the Schoolroom" is a report on school lighting published by School Life (May 1, 1921) and in a number of scientific and educational periodicals. Unfortunately it has not been issued as a separate pamphlet.

II. Studies in progress or projected:

(1) Report on "Ventilation of School Buildings." The report will represent the up-to-date and practical findings.

(2) Projected:

(a) Mental Hygiene for Normal Children; What Every Teacher Should Know About it.

(b) Making Athletic Games Safe and Healthful for School Children.

(c) Standards of Health Norms and Defects of School Children.

(d) Health and Efficiency for Teachers.

(e) Essentials in the Hygiene of Instruction and School Management.

III. The committee undertook in April, 1922, as a major project, the preparation of a program of health education for public-school teachers and teacher-training institutions. The purpose is to "study, interpret, and coordinate the materials and methods in health education so that the schools of the country may be provided with an educationally sound program of health teaching and training." Subcommittees have been appointed to grade the health-teaching material for kindergarten, elementary schools, high schools, and

normal schools; and to serve as "technical groups to judge and organize material from the standpoint of teachers, physicians, educational psychologists, dentists, nutrition experts, teachers of physical education, biologists, and public health specialists." It is planned to issue a preliminary report by the end of 1923 "to provide the best available guidance to the schools of the country relative to health teaching in the immediate future."

IV. State committees on health problems in education. The American Medical Association in 1920, through its house of delegates, "voted to urge upon each of the State medical societies that a committee of five physicians be appointed to cooperate with a similar committee of the State Teachers' Association as a joint State committee on health problems in education." This action was indorsed by the National Education Association in 1921 and each State teachers' association was urged to appoint such a committee. Forty-four State medical societies have acted and have appointed their committees. No information is available at this time relative to the action of State teachers' associations. The committee on health problems in education is urging the State associations to act. The "National Committee" "can propose material and secure data of great value, and can recommend measures that would secure better health conditions in the schools of the country," but the adoption and effective operation of such measures must depend upon organized State and local action.

American Physical Education Association.—The American Physical Education Review, published by the association, gives annually over 400 pages of material which represents the best articles printed on physical education during the current year. It includes, also, practical hints to teachers, news notes, and abstracts from current magazine articles. These abstracts are largely from medical literature. During the past two years the association has prepared (through its committees or in cooperation with other organizations) and published: (1) Uniform Medical and Physical Examination Blank for College Students (also used by secondary schools); (2) physical efficiency tests for elementary schools, city and rural; for secondary schools, boys and girls; and for Young Men's Christian Association, Young Women's Christian Association, clubs, and industrial organizations; (3) a five-year survey of college physical education; (4) a classification for a physical training library with complete index, based upon a study of the best libraries of physical education in the country. It is a complete revision of material that has gone through four revisions during the past 30 years.

Society of college directors of physical education.—The most notable activities and achievements of the society of physical directors in colleges during the past two years have been along the line of

clarification of the aims and scope of physical education and of the relation of physical education to general education.

Two reports have been issued, as follows:

(1) A report on the "Aims and Scope of Physical Education," by a special committee of the society. (Published in the American Physical Education Review, June, 1920. A slightly revised report, as adopted at the annual meeting in December, 1920, was published in School Life, February, 1921.)

(2) In cooperation with the United States Bureau of Education, a committee of the society in 1920 made a quinquennial survey of the physical education in colleges. (Published by the American Physical Education Association.)

American School Hygiene Association.—The association was established in 1907. Up to the time of the war it held annual meetings, published an annual volume of proceedings, and served as a clearing house for the workers in the various fields of school hygiene. It organized and conducted the fourth international congress on school hygiene, Buffalo, 1913. The war interrupted its activities, and no meeting was held in the years 1917 and 1918. Meetings were resumed in 1920. The proceedings for the years 1920 and 1921 have been published. The association has also published, in cooperation with the American Red Cross, a pamphlet entitled "The School Child's Health: What Mothers Should Do About It." This pamphlet aims to give mothers and teachers a practical knowledge of the diseases and body defects that school children in a large measure are subject to; a knowledge of what to look for as evidence of the existence or approach of these evils; how to prevent their occurrence; procedure in securing their cure or correction.

American Students' Health Association.—This association was organized in 1919. Its membership is composed of men and women engaged in student health work in colleges and universities. Annual meetings are held. A preliminary study by questionnaire has been made of existing conditions of student health service in colleges and universities. A beginning has been made of an employment bureau for men interested in this line of work. The secretary is Warren E. Forsythe, director university health service, University of Michigan.

NUTRITION IN EDUCATION.

Nutrition work has penetrated the schools with astonishing rapidity during the past four or five years. Nutrition classes for malnourished children have spread like influenza, and instruction in nutrition has taken almost the first place in the school health program. Two State departments of education, New York and Pennsylvania, employ nutrition supervisors. The recent development of the "newer knowledge of nutrition" and the consequent leaping demand for instruc-

tional work in nutrition by social welfare and educational organizations have demonstrated the necessity both for work of this kind and for preparation of the workers.

Nutrition clinics for delicate children.—This national organization was established in 1919 with the following chief objectives: Determining methods for identifying malnourished children; organizing physical growth and social examinations and a nutrition program by means of which the causes of malnutrition can be found and removed; training physicians, nurses, teachers, and other experienced persons in the technique of administering this nutrition program. Nutrition institutes on this basis have been held in Boston, Chicago, Rochester, New Haven, Hartford, Manchester, Grand Rapids, Battle Creek, Lincoln, Denver, Atlanta, San Francisco, Los Angeles, Honolulu, and other cities. Work in health education has been done in connection with public schools in these and other cities. The program has proved to be applicable in rural, parochial, and private schools. Satisfactory results have come from the organization of this preventive medical work as a community program in cooperation with tuberculosis associations and various types of child-helping societies. An interesting feature is the work carried on during the last three summers in connection with Doctor Grenfell's undertakings in Labrador.

The New York Nutrition Council was organized in 1920 with the primary purpose of providing a clearing house for the multiplicity of organizations in New York City that in one way or another are concerned with nutrition work. Approximately 100 organizations are represented in the council. The council, through committees, has prepared and issued a number of important reports, including "Record forms," "Training standards," "Correlation of nutrition activities," "Nutrition bibliography," and "Height and weight as an index of nutrition." These studies and reports have developed primarily out of recognized needs in the New York field, but they will be equally useful elsewhere.

ORGANIZATIONS IN SPECIAL FIELDS IN HYGIENE.

National Committee for Mental Hygiene.—The division of education of the National Committee for Mental Hygiene has recently directed much attention to the problems of mental hygiene of childhood. Its surveys have reached into the schools. During the last two years seven State surveys have been conducted, and a few cities and counties have been studied in addition. In the recent surveys special attention has been given to school children. They are studied with reference to mental diagnosis, school retardation, behavior history, environment, personality make-up, etc. The survey that was com-

pleted in Cincinnati, May, 1922, included over 4,000 public-school children. A similar study has just been completed in Louisville, Ky.

In the Cincinnati survey—

Conducted in order to find out what proportion of the school children are mentally handicapped, mentally maladjusted, and hence likely to furnish us with the grist for future juvenile and adult courts, jails, delinquent institutions, dependent institutions, and the like—a study was made of over 4,000 school children. Two per cent of these public-school children were classified as feeble-minded, 2 per cent as cases of border-line mental defect, 3.5 per cent were diagnosed as nervous and psychopathic children, 4.8 per cent as subnormal, 0.1 per cent were suffering from epilepsy, and 0.7 per cent from endocrine disorders. Approximately 6 per cent showed conduct disorders.

Whatever we spend to-day in adequately studying, treating, and training these children will be returned a hundredfold to-morrow in prevention of crime, insanity, and dependency.²⁰

A survey of the teaching of mental hygiene in normal schools was recently conducted by the questionnaire method under the auspices of the National Committee for Mental Hygiene. The result of this study was published in the January, 1921, issue of *Mental Hygiene*. The survey showed that, although few normal schools are giving definite instruction in mental hygiene, many are interested in doing so.

Another recent development in the organization of the National Committee for Mental Hygiene has been the establishment of a division on the prevention of delinquency. This division plans to furnish demonstration psychiatric clinics to a limited number of juvenile courts in this country. One is already established in St. Louis. It is cooperating with the public schools and other agencies dealing with children. Another phase of the work of this division is the conducting of demonstration clinics in communities over an extended period of time. Such a clinic is now in operation in Red Bank, N. J., serving Monmouth County. This clinic is making special studies of schools and school children, including mental and physical examination, personality studies, etc., with recommendations for treatment. This clinic cooperates with other health and social agencies in that community.

National Committee for the Prevention of Blindness.—The work of the National Committee for the Prevention of Blindness includes research, promotion of legislation, and educational activities. It carries on intensive studies into the causes of blindness and deterioration of sight and methods of prevention. It prepares bills dealing with prevention of blindness and sight conservation and aids in legislative campaigns. Its educational activities include preparation of literature and graphic material, cooperation with educational institutions, and other appropriate measures. In a large sense all its activi-

²⁰ Report of the Mental Hygiene Survey of Cincinnati, May, 1922, p. 18.

ties are educational, for they all converge upon measures for conserving vision and the training of the visually handicapped.

During the past two years the committee's more important contributions have been as follows: Three films have been produced under the title "Saving the Eye of Youth," and a large number of slides have been added to the loan collection. It has held several conservation-of-vision weeks, has exhibited at a number of health expositions, and has given 440 lectures in 15 States. The committee conducted a special educational campaign in Porto Rico at the request of and in cooperation with the Children's Bureau, and it cooperated with other organizations in underwriting and arranging for a course in Columbia University summer school for training teachers of sight-conservation classes. Model legislation covering all phases of preventing blindness has been drawn up by the committee. A course has been outlined for normal schools to prepare teachers to conserve the sight of their pupils. It has distributed 311,867 pamphlets and bulletins and 23,406 sets of posters.

The Eyesight Conservation Council was organized in 1920. Its chief activity in the first year was cooperation with the Federal Engineering Societies in their study of waste in industry. The report of the Hoover Committee on the Elimination of Waste in Industry included a section on eye conservation in industry, subsequently published by the council as "Eyesight Conservation Bulletin 1."

The council has also published a number of folders: also a Vision-testing Chart for Schools, with special literature for the school-teacher. Many thousand copies of the vision chart and folders have been sent to superintendents and teachers throughout the country. All superintendents of education are on the mailing list of the organization.

Elizabeth McCormick Memorial Fund.—The activities of the Elizabeth McCormick Memorial Fund have been concentrated on the health of children. Within the past two years the fund has continued to promote open-air and open-window rooms for frail children, as well as for well children; in the latter connection making special studies of the ventilation of schoolhouses in an effort to secure natural ventilation.

The organization has been especially interested in undernourished children, and in this connection has promoted the establishment of scales in schools, weighing and measuring of children, the establishment of milk service in schools, and adequate lunches. As intensive work it has carried on nutrition classes for undernourished children. In one high school nutrition classes were maintained for the freshmen, physiology credit being given for this. One physiology period during the week was given in charge of the nutrition worker from the fund.

In connection with the nutrition classes, each child is given a complete medical examination. Intensive study is made of cases that fail

to gain. The fund has cooperated with two school systems, of about 6,000 pupils each, Oak Park and Joliet, Ill. The work in each of these places has been under a special health teacher in the employ of the fund. The plan in each has been to develop a program of health education which could later be taken over by the existing forces within the school itself, one important phase of which has been the training of the teachers already in the schools in subject matter, methods, and devices. Statistics on weight, height, rate of growth, physical condition, and anthropometric measurements have been gathered.

Six institutes for the training of nutrition workers have been conducted by the fund at its headquarters, the last two institutes being held in 1920 and 1921.

ORGANIZATIONS AFFECTING PUBLIC OPINION AND LEGISLATION.

*National Child Health Council.*²⁹—This is a council of national organizations, founded in March, 1920, as a coordinating agency for child health activities. There are six constituent organizations: American Child Hygiene Association, American Red Cross, Child Health Organization of America, National Child Labor Committee, National Organization for Public Health Nurses, and National Tuberculosis Association.

The chief activities of the council up to the present time may be summarized as follows:

(1) It serves as a clearing house for the plans and policies of its constituent organizations and in increasing measure as a clearing house for information generally in the field of child health.

(2) It has created advisory committees, three of which have prepared important reports, as follows: (a) Report on Desirable Health Provisions in State Laws, published by numerous periodicals; (b) Report on Health for School Children, published by the Bureau of Education; (c) Report on Nutrition, published by the United States Public Health Service.

(3) Organization and general supervision of a demonstration in methods of solving child health problems of children, for which an appropriation of \$200,000 was made by the Red Cross.

"THE MANSFIELD DEMONSTRATION."

In August, 1921, Mansfield and Richland Counties, Ohio, were selected for the demonstration, as fairly representative of the average of American life with respect to economic conditions, community responsibility, and existing institutions necessary for cooperation.

²⁹ The National Child Health Council was liquidated in March, 1923. Most of its functions were taken over by the American Child Health Association.

It was believed that the results achieved in such a community would be applicable in the majority of American communities. Under direction of Dr. Walter H. Brown, work was actively begun in October, 1921. A special report from Doctor Brown in September, 1922, gives the following summary of what is planned for the "school health" part of the demonstration:

I. Health Education.—This will include all the curricular activities in the school. The director of health education has been officially appointed by the city and the county boards of education as supervisor of health education in the schools. This will give us an official entrée into the schools. With this as a basis, we are thinking in the following terms:

(a) Health institutes: We have just conducted a four-day institute for illustrating methods and content of health teaching. In addition, small institutes will be held during the year.

(b) Extension courses: The State normal schools have agreed to give credits for an extension course which will be established at Mansfield.

(c) Efforts are being made to have included in the normal schools such courses as the National Child Health Council and its advisory committees shall work out.

II. Health Supervision.—This will include a working out of the usual medical inspection of the schools to suit local conditions.

(a) Medical service: It has been possible to secure the active cooperation of the local physicians, under supervision of the director of the demonstration, to carry out the program of medical inspection.

(b) Dental service: The same conditions are arranged for dental service.

(c) School nursing: It is planned to try out the school nursing as a part of the generalized nursing program. At present we are furnishing nursing service in Mansfield to every school every day. We are just working out a plan that is less intensive for the rural area.

Bureau of Educational Experiments.—This is a "group of men and women of varied professional backgrounds" organized for the furthering of the "cooperative study of normal children in a normal environment." Its department of social, mental, and physical experiments is concerned with the experimental study of children's growth and the relation of growth to social, mental, and physical needs. In 1918-1920 the bureau conducted an elaborate "nutrition class" experiment in Public School 64, New York. A very complete report of this experiment has been published under the title of "Health Education and the Nutrition Class." The report includes an accurate description of the educational theory and procedure, studies of height and weight and mental measurements, and analysis of the health examinations. The significance of this piece of detailed experimentation is well summarized by Professor Bonser, of Teachers' College:

The unity of life which has been brought out by the experiments must be appreciated by any program which can hope to accomplish much. It may be a disappointment, yet at the same time it is a helpful fact, that to raise a child's weight from subnormal to normal involves almost the entire life situation of the child, the school, the health workers, and parents, and even the community.

Through its department of information the bureau offers its services freely to those desiring information on current experiments.

National Congress of Mothers and Parent-Teacher Associations, Inc.—The National Congress of Mothers and Parent-Teacher Associations has branches in 41 States, the Territory of Hawaii, and the Territory of Alaska. During the past two years local organizations all over the United States have presented programs in connection with the various phases of health and physical education. The Bureau of Education's Health Education Leaflet No. 5, Child Health Programs for Parent-Teacher Associations and Women's Clubs, has been widely used. In many States special programs on health have been prepared and distributed to the locals. Health plays have also been given. As this organization believes that it is better to have a strong mind in a strong body, it does all that it can to bring to the parents and teachers everywhere the necessity for teaching right health habits.

The national organization, through the Women's National Legislative Council, has cooperated consistently in the interest of Federal legislation looking to the physical education of school children.

National Child Labor Committee.—The National Child Labor Committee, which is "incorporated to promote the interests of children," has contributed consistently during the past decade and more to the progress of educational hygiene. Its effective insistence upon physical standards for working papers in State legislation governing child labor has borne fruit in a number of States. Its other major contribution has been made through its survey of child welfare, state and local. In the past two years it has conducted a survey in Tennessee for the Tennessee Child Welfare Commission, which included a thorough study of health conditions. It has also conducted two local surveys as follows:

(1) It participated in the survey of child health in Erie County, N. Y., made under the direction of the National Child Health Council in the fall of 1921. (Mother and Child, Supplement for May, 1922.)

(2) A study was made of health conditions of 1,200 working children in various occupations in Newark, N. J., and attending continuation school three hours per week, in cooperation with two Newark physicians and the school authorities. Particular attention was given to defective vision and teeth. The preliminary report was published in the *American Child*, for November, 1921.

FOUNDATIONS AND FUNDS.

Most of the great foundations contribute in one way or another to the development of educational hygiene. For the most part their contributions have been through grants of funds to operating organizations devoted to special fields or projects in the general field of

educational hygiene. The two examples presented are selected because of their large benefactions within very recent years.

Milbank Memorial Fund.—This fund is not an operating agency. It works through recognized organizations, either in response to requests for support or by discriminate selection of the organizations best qualified to carry out the aims and purposes of the fund. Its chief aim, broadly stated, may be regarded as the promotion of health and physical fitness through education. For a number of years it has supported in whole or in part the child health activities and the general health and research work carried on by 15 such organizations. Indirectly it has made a large contribution both scientifically and practically to the cause of educational hygiene.

Commonwealth Fund.—In the third annual report of the Commonwealth Fund (January, 1922) it is stated that "its efforts in the main have been directed increasingly toward accomplishing results in the three fields in which its interests mainly lie—education, child welfare, and health." Thorough study of these fields of opportunity has been carried on with the definite purpose formulating well-matured programs of continuing activity in these three fields.

Coincidentally "certain limited grants have been made to miscellaneous and comparatively unrelated projects." These include allotments to a considerable number of organizations concerned directly with the problems of educational hygiene.

A comprehensive program to aid child health was prepared and announced in June, 1922. This program provides the funds and outlines the procedure for three comprehensive "Child health demonstrations" to be carried on in three typical cities, geographically distributed, of different size but aggregating 100,000 to 120,000 population. Under general supervision and direction of an administering committee created by the Commonwealth Fund, the program is to be carried out jointly by the American Child Hygiene Association and the Child Health Organization of America; the former in charge of the program as it is related to the preschool age, the latter with the school age.³⁰ Support of the program is guaranteed for a period of five years, at an estimated annual cost of \$232,750.

The presupposition is that a complete program of child hygiene, including prenatal and maternity care, infant care, preschool care, and adequate care and instruction through the school years will demonstrate results of such value that hundreds of other communities will be encouraged to adopt similar programs.³¹

Prophecy is of dubious value, but the cost is likely to be prohibitive of any extensive adoption of similar programs, no matter how successful these special demonstrations may be. On the other hand,

³⁰The two organizations were amalgamated on Jan. 1, 1923, as the American Child Health Association.

³¹Fargo, N. Dak., was named as the seat of the first demonstration.

it is likely that out of these councils of perfection may be precipitated certain "minimum essentials" that will be widely adopted.

EDUCATION AND SOCIAL HYGIENE.

A number of voluntary organizations have made contributions to the study of sex as an educational problem and to the development of sound principles and rational procedures in sex education. Chief among these is the American Social Hygiene Association. Others are the Women's Foundation for Health and the Bureau of Social Hygiene.

American Social Hygiene Association.—In its educational phases the work of this organization has been directed toward the extension and improvement of methods for education in respect to sex. The work has been guided constantly by the presupposition that sex education should be chiefly concerned with "attitude," and only in small degree with actual information.

The major activities of the association for the years 1920-1922 may be summarized under seven heads:

(1) Production and distribution of literature and study and graphic material. This includes the publication of three books and seven pamphlets on special topics, and collaboration with the Bureau of Education in publication of a fourth book, the organization and conduct of a two-year correspondence course for social hygiene leaders, enrolling 120; the production of four new social hygiene films, and numerous slides, posters, and charts. Closely allied is the work of the association library, which has loaned books widely and has guided many public libraries in the selection of books on sex education.

(2) Cooperation with educational institutions. Four lecturers have addressed more than 100,000 high-school, college, and normal-school students each year. Of significance in this connection is the increasing request for a series of talks rather than a single talk; a realization that to present sex as a normal factor requires more than a sporadic lecture. Study groups in social hygiene have been formed in the higher institutions; more faculties are including aspects of sex as a regular part of their courses; close cooperation with the Interfraternity and Panhellenic conferences has resulted in well-defined social hygiene programs for them. Different phases of sex education have been presented in section meetings of the National Education Association conventions.

(3) Cooperation with communities. In a dozen cities there have been inaugurated community programs in social hygiene, which aim not only to rid the family of the threat of prostitution and the venereal diseases but also to train parents to effective method in sex education for their children.

(4) Cooperation with ministers. At the request of the home board of the Methodist Episcopal Church, a series of lectures was given before eight summer sessions for town and country pastors, emphasizing practical methods of procedure. This has been supplemented by a pamphlet on the minister's part in sex education and by talks at ministerial conferences.

(5) Negro work. This includes lectures to over 6,000 college and summer school students, cooperation with ministers and with the Federal Council of Churches, community surveys in conjunction with the United States Public Health Service and United States Interdepartmental Social Hygiene Board, and definite inclusion of social hygiene as part of a general negro health program supported, among others, by the negro insurance companies.

(6) Research. Arrangements have been made with the National Research Council for systematic study of the psychology of sex and the assembling of trustworthy data thereon.

(7) Cooperation with foreign lands. The association has given considerable aid to movements for the extension of social hygiene teaching to foreign countries, notably in China, Japan, and the nations of South America.

Three Government agencies have also made contributions in this field.

Public Health Service—Bureau of Education.—These two Federal bureaus have carried on the following cooperative activities in the biennium 1920-1922:

(1) Conferences. Eighteen State and regional conferences held with a total attendance of 4,511; and 29 intraschool (high school) conferences with a total attendance of 1,202 teachers.

(2) Investigations. Six special studies have been completed, as follows: Status of sex education in high schools; status of sex education in colleges and normal schools; status of sex education in summer schools, 1921 and 1922; methods used by high-school teachers in teaching reproduction and sex hygiene; opinion of college presidents on prevailing attitudes and practices of college students in sex matters; comments of 200 high-school principals on the New York City biology teachers (Peabody) report on sex education.

(3) Publications and reports:

(a) High Schools and Sex Education, 1922.

(b) The Status of Sex Education in High Schools, Bureau of Education, Bulletin, 1921, No. 52; Public Health Service, V. D. Bulletin No. 89.

(c) Suggested Outline of Summer School Course for Teachers.

(d) Summary of Comments of High School Principals on Peabody Report.

(e) The College Students and Venereal Diseases—What College Presidents Say. Public Health Reports, August 4, 1922, and Social Hygiene Bulletin, September, 1922.

In addition to these reports several articles, based on the investigations noted above, have been prepared and published in the *School Review*, *School and Society*, *Physical Education Review*, *School Science and Mathematics*, *Journal of Education*, *Educational Review*, and other periodicals.

Interdepartmental Social Hygiene Board.—This board was created by act of Congress in 1918. It concluded its activities at the end of fiscal year 1922. Within those years Congress appropriated to the board \$800,000, to be—

paid to such universities, colleges, or other suitable institutions or organizations as in the judgment of the Interdepartmental Social Hygiene Board are qualified for scientific research for the purpose of discovering and developing in accordance with the rules and regulations prescribed by the Interdepartmental Social Hygiene Board more effective educational measures in the prevention of venereal disease, and for the purpose of sociological and psychological research related thereto.

In fulfillment of this obligation the board devoted the funds at its disposal to two purposes.

(1) Establishment or enlargement of departments of hygiene in normal schools, colleges, and universities for the purpose of "influencing the education of young men and young women of to-day to instruct the intelligent parent, the highly trained teacher, and the influential citizen of to-morrow."

(2) Stimulation and support of psychological and sociological research that promised substantial results toward "better educational measures in the prevention of venereal disease."

It was recognized that exact demonstration in these fields of research, involving as they do complex and subtle problems of human motive and action, is exceedingly difficult, and that weight of evidence showing reasonable probability is in most cases the result to be expected.

The following summary shows the nature and distribution of these researches:

Johns Hopkins University Psychological Laboratory: Investigation of the informational and educational effect upon the public of certain motion-picture films (1919).

American Social Hygiene Association: (1) Preparation of a series of six motion-picture films (1919); (2) study and preparation of new social hygiene literature (1919).

Massachusetts State Psychiatric Institution: Investigation on the family of the syphilitic (1920).

Johns Hopkins University Medical School: Developing a laboratory manual and illustrative material to be used in connection with part 2 of the outline and syllabus on hygiene issued by the board (1920).

American Social Hygiene Association: (1) For completion of motion-picture films authorized under previous appropriation (1920); (2) preparation of three new motion-picture films (1920); (3) formation of a competent committee to investigate, evaluate, and report on informational and educational values of social hygiene literature (1920).

University of Oregon: Special educational demonstration in cooperation with the Oregon Social Hygiene Association and selected school systems within the State of Oregon (1921).

Stanford University: (1) An investigation in moral development with special reference to the problems of social hygiene (1921); (2) an investigation of educational means and measures in social hygiene (1921).

American Social Hygiene Association: For continuing and extending the stimulation of educational research and demonstration activities in normal schools, colleges, and universities (1921).

Forty normal schools, colleges, and universities were aided to develop their departments of hygiene so as to include in the—

departmental program regular curricular provision for the classroom presentation of the scientific facts of hygiene in conformity with established educational methods; periodic confidential individual health examinations of all students, with proper safeguarding personal advice and subsequent follow-up conferences; and the organization and supervision of physical training, recreation, and athletics, for all students. In addition there was supplied experienced counsel and advice for assistance in the organization of these programs under the independent educational control of the institutions concerned.

In this group of 40 institutions were included 4 schools for the colored people, 14 normal schools and teachers' colleges, and 22 colleges and universities. During the year 1922 at least 54,000 young men and young women in these institutions came under the influence of these departments.

Reports from the responsible administrative officers of these institutions indicate that progress has been made in giving sex social hygiene its right setting as a normal part of a complete educational program; in recognition of the importance of a well-organized and competently conducted department of hygiene as an adjunct to efficient administration; and in appreciation of the rôle of hygiene in the general life of the institution; and that in most of them the gains made through this Federal aid will be permanent in these institutions.

CHAPTER VII.

EDUCATIONAL EXTENSION.

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CONTENTS.—Foreword—Definition—Aims—Standards—Home Study—Extension teaching—Extension courses for class instruction—Correspondence courses—Adult education—Extension activities of agricultural and mechanical colleges—Extension work of the normal schools—Outstanding developments in university extension, 1921-1922—Radio education—Package library service.

FOREWORD.

This report is not a complete survey of educational extension in the United States—far from it. The limitations of time, space, and cost necessarily set by the Commissioner of Education forestall a complete detailed statistical review of the work of the past biennium.

A full account in detail would require visits to every Commonwealth, a very large expenditure of time and money, and a report of several volumes. Consequently, no attempt has been made to include all institutions, to summarize all statistics, or to describe fully every form of extension activity of every organization. At best a mere bird's-eye view can be given, but with sufficient clearness and completeness, it is hoped, to warrant the conclusion:

1. That the demand for popular education to include "all the people" is rapidly growing and will soon manifest itself in statewide programs, for all citizens of all occupations and all ages—men, women, and children—who can not secure formal instruction within our schools and colleges as now organized.

2. That notwithstanding the remarkable increase in enrollment in our secondary schools and colleges, extension teaching has been the outstanding feature of educational effort in this country in the past two years, and in growth has far surpassed any other phase of educational development.

3. This growth is not ephemeral but substantial. Higher standards are being set and maintained, and those engaged in the older types of instruction are more readily and more fully recognizing, appreciating, and crediting the work which is being done. To

quote Professor Moulton, of the University of Chicago, "University extension has a distinct place in the history of education. It is the gradual evolution of the full conception of what a university is."

DEFINITION.

Educational extension for the purposes of this report is any effort made by any educational institution or organization for the purpose of carrying its instruction, no matter of what character, to groups of people or individuals who can not avail themselves of such instruction in the regular prescribed method of such institution as resident students. It is concerned chiefly with adults, being in fact the chief instrument for developing adult education.

University extension is the organized and systematic effort to bring some of the advantages for culture and instruction within the university to people who are not enrolled as resident students, and thus to make the campus of the university as wide as the State itself. It renders the resources of the university's faculty, libraries, laboratories, and shops available to the largest possible number of individuals and communities, by carrying them out into the State and applying them in creative helpfulness. A university should not only discover truth; but disseminate truth; and university extension, therefore, is an attempt to bring the university to those who can not go to it.

This is especially true of a State university, supported as it is by the taxes of all the people; it is under moral and business obligation to render service to each citizen and to the State. It fulfills this obligation in a measure by educating in residence young men and women and sending them back into their home communities with a broader outlook, a more intelligent comprehension of the problems of life, expert knowledge or acquired skill through professional training, and especially the inspiration, ambition, and ability for unselfish service as citizens of the Commonwealth.

But there exists in every community a considerable class of persons who have capacity, leisure, and ambition and who have claim upon the State for educational opportunities other than the formal instruction given within the walls of institutions.

Through different forms of extension service the university can and does open the door of educational hope to thousands of such citizens who can not attend school. Its constant aim is to make the university the center of every movement which concerns the interests of the State and to give every man a chance to get the highest education possible at the smallest practicable cost—to bring the university and the home in closer touch, to carry the university to

every city, town, and country community, and into every school and every home, reaching out a helpful hand to every citizen.

University extension enables any one, young or old, in occupation to broaden his knowledge, to extend his vision, to fit himself for new duties, to keep up with improvements and discoveries, and to keep in touch with the best thought of the times. It has passed the experimental stage and is now a recognized department in practically every State institution and in many colleges under private control. It is one phase of the general tendency to democratize education.

Through extension work the resources of the university become more available to the citizens of the State. In a very true and broad sense it makes the institution fulfill its true function of a public service corporation responding to the call for aid, whether from the public elementary schools, or the secondary schools, for the improvement of public health, or for civic betterment or for the betterment of economic or industrial conditions.

The university has two important functions: To give instruction to resident students in the cultural, professional, and vocational branches of higher education; and to promote research and investigation in the important fields of human interest and experience. An extension division has three functions: To carry as far as possible to extramural students the advantage for culture and instruction offered in residence; to disseminate the valuable knowledge obtained from research and investigation; and, finally, in addition to these two correlative functions, to serve as a cooperative bureau or clearing house through which many educational and public-service resources of the university may be made available for effective public use.

AIMS.

University extension in some form has been carried on since the inauguration of Chataqua University in 1885. The University of Wisconsin, the pioneer State institution in this field, took up the work in 1892. The International Correspondence School, a large commercial school, was organized within a year of that time. It was not until 1906, however, that Wisconsin organized its university extension division on its present basis as an extramural college with a dean and separate faculty.

Between 1906 and 1913, inclusive, 28 institutions organized university extension, and within those dates 21 other institutions reorganized. Since 1913, in the last decade, the work has developed so extensively that practically every institution of learning—university, college, normal school, technical school, or professional school, whether private or public—now engages in some form of extension activity.

Why? Because extension service is the practical application of the principle underlying all tax-supported educational institutions, from the elementary school to the State university.

Justification for the maintenance of schools, colleges, and universities from public moneys is contained in the general welfare clause of our National and State Constitutions.

The only justification for the expenditure of public funds derived from taxation by the State for universal education is the fact now recognized by all Commonwealths that education produces better citizens and that a properly trained citizen is generally an asset and an illiterate or untrained citizen a liability in a community. Thomas Jefferson declared with fervor that "no other foundation can be devised for the preservation of freedom and happiness than the diffusion of knowledge among the people. If a people expects to be ignorant and free in a state of civilization, it expects what never was and never will be. Preach a crusade against ignorance!"

On this principle the United States has entered upon the most gigantic educational task undertaken by any nation; namely, to provide at public expense educational opportunity for "all the children of all the people" from the kindergarten and elementary school through the university.

The program of universal education upon which the United States has entered, referred to above, contemplates only the education of our youth, on the assumption that the schools provide a sufficient amount of education of the proper character to satisfy the requirements of good citizenship. This has proven not to be the case. A very large proportion of pupils of the elementary school drop out at the end of the fifth year with only the bare elements of an education and a fair use of the tools of knowledge, and increasing numbers are eliminated in each grade after the fifth up through the high school.

Although the growth in enrollment in the secondary schools is one of the outstanding features of educational development in the past decade, still only about 6 per cent of high-school pupils graduate, and only about 2 per cent go to college. This condition has brought about a low average of training supplied by the schools, and it is charged that we are training a sixth-grade citizenship in the United States.

This is not sufficient for the demands of citizenship, and so means must be provided for the training of those who for one reason or another are not able to secure the benefit of the whole program of formal education provided by the public schools.

Frank P. Graves, commissioner of education, New York, says there are two things that must be done: (1) Stop the flood of illit-

eracy and inferior intelligence from Europe and admit only the foreigners who can strengthen American stock and ideals; (2) find some way to stop the wholesale withdrawals from school of 30 per cent of young people before they are 14, and 60 per cent before they have completed the eighth grade.

The slogan, "Educate all the children of all the people" is rapidly being broadened to "Educate all the people"—boys, girls, men, and women of all ages and conditions and occupations. This is what educational extension is rapidly undertaking to do. Although millions are being reached, it has only fairly begun its supreme task. To fit every man and woman for his or her job, thereby making a better economic and social asset for the State, is the goal aimed at.

Since the franchise has been made universal it has become, as never before, "a race between education and annihilation." A recognition of this fact is contained in the many organizations, including the "Citizenship Council" recently created by President Harding's Executive order for citizenship education and training.

STANDARDS.

THE NATIONAL UNIVERSITY EXTENSION ASSOCIATION.

The first meeting of the national university extension conference was held at the University of Wisconsin in 1915. At this meeting the National University Extension Association was formed with 22 members. A constitution and by-laws were adopted April 13, 1916, in which the purpose of the association is stated to be:

The establishment of an official and authorized organization through which colleges and universities and individuals engaged in educational extension work may confer for their mutual advantage and for the development and promotion of the best ideas, methods, and standards for the interpretation and dissemination of the accumulated knowledge of the race to all who desire to share its benefits.

Consistent with its purpose, the membership in the association is limited to colleges and universities of known and recognized standing whose sole aim is educational service. Institutions conducted for financial gain or profit are not eligible for membership.

The members of the association in 1922 were the following institutions: University of Alabama, University of Arizona, University of Arkansas, University of California, University of Chicago, University of Colorado, Columbia University, University of Florida, Harvard University, Indiana University, State University of Iowa, Iowa State College, University of Kansas, University of Kentucky, Massachusetts Department of Education, University of Michigan, University of Minnesota, Mississippi Agricultural and Mechanical

College, University of Missouri, University of Nebraska, University of the State of New York, University of North Carolina, University of North Dakota, University of Oklahoma, University of Oregon, University of Pennsylvania, Pennsylvania State College, University of South Carolina, University of South Dakota, University of Tennessee, University of Texas, University of Utah, University of Virginia, Washington University, State College of Washington, University of West Virginia, University of Wisconsin.

This association has done valuable work in attaining the aims set forth in its constitution, by fostering a closer relationship and better acquaintance between member institutions, by adopting more uniform practices and methods, and by setting up proper ideals and standards for the many institutions of various ranks which in the past few years have organized extension work. It has been instrumental in creating a more sympathetic attitude toward extension work on the part of regular members of the faculties of institutions, because of a better acquaintance with it.

Nomenclature.—One important recommendation of the association on nomenclature was adopted in 1920, as follows:

That University Extension Division should be the general name of the administrative organization in charge of extramural work; department, the name of the first subdivision; bureau, the name of the second subdivision; director or dean, the title of the presiding officer; acting director, assistant director, acting dean, or assistant dean, the titles of other officers; executive secretary, the title of the head of a bureau.

Since then most institutions have changed their announcements to conform to this recommendation.

The following recommendations with reference to the standardization of university extension credit courses, with the understanding that both direct class instruction and courses by correspondence were included, were adopted in 1920:

1. *Character and Content of Courses.*—The content of an extension-credit course shall be practically equivalent to that of a similar course offered in residence. If, in any case, an extension-credit course is not given in residence, such course shall be approved by the head of the department directly concerned and such other authorities as the rules of the institution provide for, and also such course shall appear in the proper place in the general announcement, having an appropriate title and number.

2. *Condition of Admission.*—Students shall be admitted to extension-credit courses provided they satisfy the proper official that they can pursue the course with profit, and providing they pay the regulation fee.

3. *Time Allotted for Extension Class Work.*—In the case of direct class instruction, extension-credit courses shall involve practically the same number of hours of class instruction as are devoted to similar classes in residence, and in the case of correspondence instruction the extension course shall be the equivalent in scope to that of the corresponding course offered on the campus.

4. *Examinations.*—No student should be given credit in any extension-credit course unless he satisfies the instructor of his mastery of the course by means of a thorough examination or other suitable test.

5. *Extension Instructors.*—All instructors of extension-credit courses shall be members of the regular university faculty, or shall be appointed as non-resident members of the faculty, their names to appear in the regular faculty list.

6. *Credits.*—Students who pursue an extension course, and who meet all the requirements laid down with reference to attendance, class work, and examinations, shall be given the same credit as that given for a similar course conducted in residence.

7. *Records.*—In recording extension-credit courses, note shall be made that such credits were earned through extension work, either by correspondence instruction or by direct class instruction.

COOPERATION WITH OTHER AGENCIES.

While most of the extension work is directed by State universities, much of it is actually done in cooperation with other institutions and agencies. For example, the extension work of the University of Michigan is carried on through 12 bureaus. Through the medium of these bureaus it cooperates with the various colleges and schools of the university, such as the general library, the medical school, the school of engineering, etc., and with such other agencies as the State medical society, the State dental society, the State board of health, and the Detroit College of Medicine and Surgery. This is a comparatively new feature of the work and is finding an unusual response from the people.

In Virginia, the University of Virginia and the College of William and Mary, in order to prevent duplication and overlapping, cooperate by confining their extension teaching classes to certain portions of the State and by offering courses jointly in Richmond, under one bureau head, with a joint announcement of courses.

In Florida the extension division has charge of the work of all the State institutions.

The work may be aided materially by cooperation with such organizations as the American Institute of Banking, Credit Men's Association, chambers of commerce, union labor, public schools, Federal Board of Vocational Education, the American Legion, Y. M. C. A., Y. W. C. A., industrial concerns, etc.

In South Carolina the home demonstration work under the Smith-Lever Act is officially connected with Winthrop College, and is conducted in cooperation with Clemson College and the Federal Department of Agriculture.

DANGER OF DUPLICATION.

There is danger of duplication of effort if all the educational institutions in each State attempt a full program of extension, and to

prevent this there should be cooperation of all in a general program, each assuming the task for which it is best fitted.

Correspondence courses, extension teaching courses in the same city, package libraries, and other forms of service should not be duplicated.

STATE DEPARTMENT OF PUBLIC INSTRUCTION.

At present most of the extension work in the United States is done through universities, colleges, normal schools, and other organized educational institutions. In some States that maintain no university this work is done through the State department of education, and indications point to the organization of extension work in the departments of public instruction in many other States, although they may support universities and colleges.

Typical of the work of State departments of education is that done in Massachusetts, a description of which follows:

SURVEY OF STATE UNIVERSITY EXTENSION IN MASSACHUSETTS.

The Massachusetts Division of University Extension was established by law in 1915, and it began to function with the enrollment of students in January, 1916.

As Massachusetts has no State university, the division was organized in the State department of education. Though this arrangement as to control is unique in the history of university extension, it has certain advantages. Because independent of a purely academic control, university extension in Massachusetts can be more elastic in its offering and methods of administration and instruction, more free in its choice of supervisory officers and instructors other than members of academic faculties—in short, it can be more readily responsive to the needs of the public.

The division is committed to short-unit courses. Its courses vary from 5 to 20 assignments in length, the number of assignments in a course depending not upon an artificial standard as to length, but upon the amount of time and space needed for the vital teaching of the subject. It has been found easy to introduce the short-unit course for two reasons: First, because the division has no traditions nor prejudices as to the amount of a subject that should be included in an extension course; second, because adult students in Massachusetts ordinarily choose courses for the work's sake and not for the sake of degrees, academic credit, and the like.

The division offers nearly 200 different courses in English, foreign languages, mathematics, education, government, economics, commercial subjects, history, science, electrical, mechanical, and structural engineering, drawing, textiles, homemaking, and civil-

service preparation. These courses are offered by both the correspondence and the class method of instruction. No formal prerequisites are required before enrollment in courses, except a reasonable indication that the prospective student can profit by the instruction.

Classes are organized to meet anywhere, at any hour. The only condition imposed is that a sufficient number of persons enroll to assure an average attendance of at least 20. Such classes meet once per week.

Massachusetts extension classes do not duplicate the work of the evening schools. In the first place, they meet the needs of a group in the community who would not care to commit themselves to the long courses, the frequent class meetings, the predetermined hours and places of meeting of such schools. Probably, if there were no extension classes, this group of adults would not undertake study at all. It is fairly certain that they would not attend evening schools as these schools are at present organized.

The significant feature in Massachusetts correspondence instruction is the emphasis placed on the student himself rather than on the subject he studies. The most important element in an enrollment is the human being it represents. Correspondence instructors are selected not so much because of the number of their degrees and the books they have written, nor even because of their profoundness of learning, but because of the definite usable quality of their scholarship and their capacity to establish a friendly helpful relation with their students.

The breadth of this program has resulted in making every man and woman in the State a prospective university-extension student. The State is offering something for everybody, and consequently the university-extension idea has penetrated into every part of the social structure in Massachusetts. The clerk, the mechanic, the housewife, the business man, the policeman and the fireman, the teacher, the engineer—from the unlettered immigrant on the one extreme to the college graduate on the other—all are represented in the division's records.

Numerically, enrollment has advanced in almost geometric progression. At the end of the first year the division had only a few more than 3,000 students; to-day the total is well above 100,000, and it is significant of growth that more than a third of that number represents enrollments for the past year alone.

But numbers by themselves are less important than the geographical distribution of students and classes. It would have been comparatively simple to secure heavy enrollment by concentrating effort in a dozen or fewer large cities and towns, neglecting meanwhile the more remote corners of the State. This, however, has not been

done. Each year active effort is directed toward filling in the gaps, toward carrying instruction into towns where university extension has not before been well represented. In consequence, there is hardly a town in the State where classes have not been held, and the post offices are few which do not handle the mail of university extension correspondence students.

DEPARTMENT OF PUBLIC INSTRUCTION OF PENNSYLVANIA.

The Department of Public Instruction of Pennsylvania has prepared a very definite plan of educational extension, but on account of lack of funds has not been able to carry it out.

The relations between the Department of Public Instruction of Pennsylvania and the institutions of higher learning—45 colleges and universities accredited by the College and University Council of Pennsylvania, and 13 State normal schools—are in the following fields of proposed service: Extension work, adult education, public school relations, survey service, lecture service, study clubs, and research work.

It defines extension work as "an organized effort to give to the adult population and others out of school some of the advantages enjoyed by those who attended campus classes," and adopts as a slogan "If you can not go to a college or university, the college or university will come to you."

The program of activities has been arranged with the following general propositions in mind:

That education is a continuing process, beginning at the cradle and ending at the grave. Every day there is added recognition of this fact, as people of all ages are increasingly allying themselves with every form of educational endeavor.

That there are various formal educational agencies providing education during special periods: The kindergartens and primary schools cover the period of early childhood; the elementary schools take care of growing boys and girls; the high schools promote the training of youth; while the colleges and universities minister to young men and women. Supplementing the work of extension education now offered by certain institutions of higher learning, there is a miscellaneous group of agencies offering educational opportunities to the out-of-school population. The department of public instruction will give assistance in this field in order that the work may be enlarged and become increasingly more effective.

That there is a wide field of educational endeavor yet untouched, and the department of public instruction offers its assistance in developing the potential possibilities of all of the institutions of

higher learning in order that they may bring definite and significant educational opportunities to the masses of the people in their immediate vicinities.

This plan has the cordial indorsement of the presidents of practically all of the colleges in the Commonwealth. A number of institutions are already doing some of the work, but the field is very large, and when one considers the number of college students in proportion to the whole population and the limited number of college students who are now taking extension work under college professors, it is readily seen that academic influences are directly touching but a small fraction of the population.

Although the 45 accredited institutions of higher learning in 1920 enrolled 44,109 students and the 13 normal schools approximately 5,000 students, this total enrollment of 49,109, if all had come from Pennsylvania, would be only about 1 to 200 of the total population of the State—8,720,159. It is the purpose of this extension work to be of service to the masses who have not had the advantages of college training.

The department will ask the next session of the legislature to make an appropriation for this cooperative scheme for distribution among the several institutions to carry on such work as they may inaugurate and may be mutually agreed upon.

THE UNIVERSITY OF THE STATE OF NEW YORK.

The University of the State of New York, through its division of vocational and extension education, conducts evening classes in elementary education and also evening extension schools and classes of secondary grade. It does not undertake any extension work of higher grade. This phase of the work is carried on wholly by the colleges, universities, and normal schools.

HOME STUDY.

In his annual report for 1922 Dr. James C. Egbert, the director of university extension of Columbia University, says:

Home study is the youngest of the various branches of university extension, and each year is gathering the experience which is so essential. Columbia University desires to offer opportunities for home study, but insists upon a plan consistent with the traditions of the university. It is certainly incumbent upon us not to abandon those who can not attend class exercises and whose only hope is in home study. Many are turning to institutions which are organized on a purely business basis and which make fabulous sums of money because of the eagerness of American youth for higher education. Institutions whose first purpose is education and not mercenary gain should meet the eager desires of these young people with programs suitable for such students and with prices determined by the cost and not by the profit to be obtained. Experience has

shown that in general the desire does not exist on the part of these students for cultural subjects. They want that which can be made immediately useful. To encourage a healthy demand from an educational point of view, we are building up a background of cultural studies and, parallel with this, courses of immediate practical value. Without exception the commercial correspondence schools have been organized to meet only the latter need, the utilitarian demand.

Even educational institutions of standing that are offering correspondence courses focus their efforts toward the goal of receiving credit for an academic degree. In other words, there appears to be very little of home study work which has for its object simply adding to general knowledge. The purpose of such study seems generally to be the immediate capitalization of what is learned, either in the form of financial revenue or academic credits. Degrees in Columbia stand for academic residence and actual class instruction. Hence it would be inappropriate and inconsistent to suggest credit for degrees for these courses of home study. Nevertheless, it would be well for us to consider whether the completion of a series of courses in home study and the passing of examinations might not be recognized by a certificate issued with academic authority.

EXTENSION TEACHING.

The term "Extension teaching" is an importation. What it signifies may be attributed to English origin, although the movement which led to offering university opportunities to the multitude is simply one phase of the general tendency to democratize education.

Oxford and Cambridge became aware that they were serving a small and select body of students and were, therefore, useful only to an insignificant part of the community and had, as a consequence, little influence on the national life.

In its early history, extension teaching assumed the character of a lyceum, so that instruction was given by courses of lectures, not too profound, often illustrated, intending to entertain as well as to inform, and it was this form of extension teaching which passed across the sea.

In this early form it naturally failed of academic recognition and met with universal skepticism amongst regular members of university faculties. Its development has followed two distinct lines—courses by correspondence and the organization of classes for regular instruction in centers away from the university. These forms are now almost universally recognized for credit in academic circles.

The prejudice on the part of those who feared the ascendancy of the nonacademic in education is rapidly disappearing. Extension teaching has brought higher education within the reach of a broader constituency and has widened the view of those engaged in academic work. Certain theories originally regarded with abhorrence by many have finally been accepted by a timorous and hesitating university and collegiate public. The walls of the university are no

longer regarded as a necessary environment for serious courses and serious-minded students. At present there are in this country probably more than 300,000 students pursuing extra-mural courses of one sort or another.

EXTENSION COURSES FOR CLASS INSTRUCTION.

Definition.—An extension course is a systematic and organized unit of work in a given subject, requiring a prescribed amount of study and recitation, but conducted by the extension organization. Extension courses for class instruction are courses of instruction corresponding closely with those regularly given in the university or other institution by regular members of the faculty, and are under the administration, supervision, and control of the institution for the benefit of persons unable to attend the regular courses of instruction and to take work in residence. Each course represents a definite amount of study corresponding to an equivalent amount of work done in residence at the institution, and when completed satisfactorily by persons meeting the entrance requirements of the institution receives the same degree of credit as if taken in residence.

Instructors.—All instructors of such extension courses for credit are members of the regular faculty, or are appointed as nonresident members of the faculty, their names appearing on the regular faculty list.

Credit.—The course of a class meeting one night a week for two hours during the semester of 16 weeks receives two semester hours, or one session-hour, of credit.

One-half of the two-hour period is generally used for lecture and the remainder for class discussion and conference.

They may be divided into two classes, (a) noncredit courses and (b) credit courses. Noncredit courses include elementary subjects and advanced courses to meet the needs of those who wish to study some special phase of work for its immediate practical value and of others who desire to continue work for its purely cultural value, such as literature, language, sociology.

Professional courses.—There is an increasing demand on the part of professional men for advanced or postgraduate instruction in their respective professions relating to recent discoveries or developments in medicine, sanitation, and health. This is specially true of physicians, and postgraduate medical extension courses are now offered by a number of universities, including Wisconsin, Michigan, Iowa, North Carolina.

Extent.—There were in 1921, according to a report of W. D. Henderson, 48 institutions, including normal schools, colleges, and

universities, conducting extension teaching classes, with an enrollment of about 92,000 students. Forty-four institutions, exclusive of normal schools and agricultural and mechanical colleges, indicated for this report (1922) that they were offering such courses, with increasing attendance everywhere.

Extension courses as offered by noncommercial schools are conducted by three types of institutions, namely, (a) normal schools, (b) colleges, and (c) universities.

The number of students doing extension credit work in the universities of this country in 1921 by direct classroom instruction was, according to Mr. Henderson's report, 27,680, and this phase of extension work seems to be increasing more rapidly than any other. For the purposes of this report the following enrollment was reported for 1922:

University extension enrollment, 1922.

University of Arkansas.....	564	University of Minnesota.....	7,802
University of Southern California.....	2,400	University of Michigan.....	700
University of California.....	19,755	University of Rochester.....	1,300
Columbia University.....	13,717	Syracuse University.....	1,117
Yale University.....	490	University of Oregon.....	2,583
University of Florida.....	3,000	Pennsylvania State College.....	9,724
Indiana University.....	4,800	Temple University.....	337
State Normal School of Louisiana.....	120	University of Virginia.....	553
		College of William and Mary.....	900

Type and range of subjects.—The rapid expansion of this work has been favored from the first by the type and range of subjects in which courses are offered. For the demand for education of this kind is concerned not with particular, closely defined groups, but with the whole adult population. To be sure, in some quarters the demand is more pressing as the lack of essential education is greater, but everywhere, among men and women of every class and occupation, there is evident the desire for further opportunities to study. The bulletins describing the courses offered by the largest correspondence and university extension institutions contain upward of 150 courses, including such section headings among the industrial courses as mathematics, drawing, steam engineering, electricity, structural engineering, textiles, natural science, commerce and management, history and government, and business economics. Within each group are comprised, so far as possible, courses ranging from the most elementary to those of college grade.

Distribution.—The problem of making these courses widely available to classes is one of reaching fairly compact, well-centralized groups, and the method of approach is accordingly direct. Agents

of the university or schools consult with industrial executives, the representatives of business and social organizations, and school superintendents, and through them discover for what subjects each community has a genuine need. Instructors are then appointed, according to the nature of the courses, from college or from commercial and industrial specialists, and it is significant of the whole university-extension scheme that an instructor's formal connections and affiliations count less toward his appointment than his ability to give vital, effective instruction.

Place of meeting.—Usually study rooms and lecture halls in local school buildings, provided by the courtesy of the school departments, serve as class meeting places; and in some instances as many as half a dozen university-extension classes meet in a building on a single evening. When a class is of special interest to the employees of a certain industrial plant, it is frequently arranged to meet in the plant itself. Public-library halls and clubrooms are also used on occasion, but always with the understanding that every university-extension class, whether held in a public or a private building, is open to any resident of the State. The chief consideration in the choice of the meeting place is this—that it enables the institution to reach the people where they are.

Certificates.—As a tangible evidence of achievement, each student who successfully finishes a course either by class or by mail is awarded by many institutions a certificate giving the name and grade of the course and the number of lessons completed. On certificates for all college-grade courses, the work done is usually stated also in terms of equivalent semester hours.

Some of the institutions reporting extension-class instruction were: University of Alabama, University of Arkansas, University of Southern California, University of California, University of Colorado, Columbia University, Yale University, University of Florida, University of Chicago, the College of William and Mary, University of Indiana, Iowa State University, State Normal School of Louisiana, Howard College, Tufts College, Massachusetts Institute of Technology, Boston College, Boston University, Wellesley College, Simmons College, University of Minnesota, University of Michigan, Winthrop College, North Carolina College for Women, North Carolina State College, University of North Carolina, University of New Mexico, Rutgers College, State Department of Education of Massachusetts, Elmira College, University of Rochester, Syracuse University, University of the State of New York, Hunter College, University of North Dakota, Municipal University of Akron, Ohio, University of Oregon, Pennsylvania State College, Temple University, University of Pennsylvania, George Peabody

College for Teachers, University of South Dakota, University of Wisconsin, University of Virginia.

CORRESPONDENCE COURSES.

Advantages.—In correspondence study the institution projects itself into every part of the State and many of them into every part of the Nation, and is thus enabled to serve its citizens regardless of their geographical location.

Correspondence courses, while not affording the usual opportunity for student-to-student contact in a social group, or personal contact with instructor, are no less large in their appeal than extension teaching classes. There is always a skepticism about the value of correspondence courses, which is usually removed after the first experiment. Student and instructor by actual trial quickly come to recognize that correspondence study has its own peculiar advantages: it is available at any place and any time to any person; each paper the student submits gets the individual and undivided attention of an instructor; "bluffing" is out of the question, the student must prepare himself on every part of the lesson. He may set his own pace, unhurried by more brilliant students and unhampered by sluggards.

Personality can be sensed even at a great distance, and the successful instructor in correspondence study never fails to arouse a personal interest in his student. Those skeptical of or hostile to correspondence study hold the opinion that distance between the student and teacher is fatal to the teaching process, that thoroughgoing instruction can not be given by mail, and that besides the lack of personal contact there are the insuperable difficulties of lack of library material and laboratory essentials. They also argue that an insistent demand for popularizing knowledge would be sufficiently influential to lower the standards of instruction.

But the learning process is a cooperative one. The student's task must be interpreted to him, the nature of the work explained, the difficulties pointed out, and certain assistance given, and always guidance, but in turn the student must do the work. Such a cooperation is possible by correspondence, especially since those who elect to study by correspondence manifest a higher degree of purpose and much greater maturity than those who enter colleges or universities.

Extent.—In 1921, according to statistics collected by W. D. Henderson, director of the division of extension service, University of Michigan, correspondence courses were offered by educational institutions in 39 of the States of the Union. In these States 75 non-commercial institutions were offering correspondence courses. Of

this number, 63 institutions were supported by public funds; the remaining 12 were supported by private endowment. Out of 44 institutions, not including normal schools and agricultural and mechanical colleges reporting information for this report, 27 are offering instruction by correspondence.

The number of students doing extension credit work by correspondence in the universities of this country was in 1921, in round numbers, 15,150. Enrollment for 1922, including credit and non-credit courses, was reported by a few of the institutions as follows:

University of Arkansas.....	526	University of Minnesota.....	1,200
University of California.....	4,387	University of Oregon.....	1,136
Chicago University.....	6,658	Pennsylvania State College....	4,862
Columbia University.....	169	George Peabody College.....	646
University of Kentucky.....	900	University of South Dakota....	443
University of Indiana.....	1,200	University of Wisconsin (for	
State Normal of Louisiana....	300	the biennium).....	29,359

Correspondence work is conducted by noncommercial institutions, according to Mr. Klein's report in 1920, in 39 States and the District of Columbia. In all of these States except one work is conducted by State-supported institutions. Of 73 listed, 61 are supported by public funds; 12 are privately endowed.

Character of courses.—Correspondence courses in industrial subjects have been an important part of adult education for more than 30 years, and many of the courses have received wide publicity. During this 30-year period one well-known correspondence school has enrolled nearly 3,000,000 students, mostly in industrial subjects; and this same school during the last year sent out more than 1,000,000 lesson assignments.

Besides the privately organized correspondence schools nearly every State now has a correspondence school system supported by taxation. These State-supported institutions are usually organized as a department or division of the State university, where there is one. In States like Massachusetts and New York, however, where there are no State universities, the correspondence instruction is organized in the State department of education.

Method of conducting.—All correspondence instruction is conducted through the mails. By this method the student is sent a supply of specially prepared texts. At the end of each text a series of questions is asked which the student is requested to answer, after having carefully studied the subject matter of the text. These answers are sent to the correspondence school for correction. When these have been carefully corrected and graded by instructors, the percentage given is marked on the corrected paper and returned to the student so that he may see just where he has made errors.

For whom intended.—There is scarcely a man or woman to whom the benefits of correspondence study may not apply, but it is especially helpful—

1. To those who must work for their living but wish to advance themselves in their own lines while they work.

2. To the man too old or unable to go to school who yet needs more knowledge in his own profession or who seeks to change his vocation.

3. To the student who is preparing for college or university.

4. To the teacher who finds new demands made upon her by the advance in education.

5. To the young man or woman who wishes to prepare for a business career.

6. To the man who desires some interest outside of himself.

7. To housekeepers and homemakers who wish to keep up with the times.

8. To the practical men in business, the professions, and vocations: to those in public service—in fact to all who are eager for knowledge or advancement and are reaching out for mental stimulus and desire to keep abreast of the times.

By whom prepared.—The courses are prepared and given by the members of the university or college faculty, and each course represents a definite amount of work corresponding to an equivalence of work done in residence at the college or university or in the standardized schools.

University unit.—Units of instruction have been established in the various grades of schools. The unit term time for a study in the university is the half school year, called a semester. A full-time study for a semester at the university has five daily one-hour recitation or lecture periods. One credit toward graduation is involved in one recitation or lecture hour a week.

School unit.—In the high school and the elementary school the unit of instruction is measured by the school year. In the high school, for example, the unit means the equivalent of five recitations a week for one year in one branch of study.

Correspondence-study unit.—These established standards are followed in correspondence-study courses, and wherever practicable a five-hour study at the university for one semester, or a five-recitation study in the high school, is divided into 40 assignments. The former, when taken for university credit, involves five credits toward graduation; there are eight assignments for each credit. The latter represents the equivalent of a unit study of preparatory grade.

Time required.—The required work of a unit or 40-assignment course may be done by the average student in 40 weeks on a minimum leisure for study of one hour a day, six days in the week. It is, however, the student's privilege to pursue his studies as rapidly as he is able, consistent with good work.

The lesson.—In some courses the assignment may call for but a single lesson report, but in other courses the assignment may be divided into two or more lessons. In all cases the assignment represents an average week's work and not an evening's work, as at school.

Examinations.—Examinations are optional with the student, but are required where credits or certificates are sought. These examinations must be taken at the university or under conditions approved by the university.

For a more detailed and complete report on correspondence study in universities and colleges, see Bulletin, 1920, No. 10, United States Bureau of Education, by Arthur J. Klein.

PACKAGE LIBRARY SERVICE.

Package library service supplies collections of material, all on the same subject, consisting of articles clipped from current periodicals and of pamphlets, addresses, and printed reports of educational institutions, State and National organizations, State and Federal bureaus, and from any other sources.

Following is a description from the announcement of the extension division of Indiana University:

"Package library," a term that was once obscure and misleading, has in the past few years become one of the corner stone expressions of university extension work. This system for the distribution of authentic information is distinctly the product of the extension movement and is based on a real need for educational service of this character.

It is a service of information on subjects of a character chiefly social, economic, and political, although it is rapidly developing into the fields of literature, art, and science. It is a service which assists people in writing articles, preparing debates, teaching classes, planning programs.

The manner of distribution is through a package, just such a package as one receives from any mail-order house. It contains an assortment of material, all of which bears directly or indirectly on the subject for which it is asked. It consists of good articles from the best magazines, bulletins issued by authoritative commissions, pamphlets, publications of State and Federal Governments, etc.

This package saves the difficulty of borrowing and the expense of buying. It gives in a single package material which would require hours of time to locate and to obtain.

It is easy to see how this system builds up a collection of material which is at once authentic, up to date, and compact in form. The periodicals to which the extension division subscribes are filled with discussions of the latest events of interest and importance, with criticisms and reviews, with fiction and

poetry. These articles are filed with discrimination in the package libraries to which they belong. An individual package deals usually with several phases of its subject. It will contain, perhaps, a good general summary of a situation, arguments by partisan writers, a retrospect, a forecast, a statistical article, a detailed analysis. Although it is often very difficult to obtain suitable material on all phases of a subject, the service aims at breadth of view and fairness of treatment. It does not foster the dissemination of propaganda, but the furnishing of information and the stimulation of interest.

The University of Indiana circulated 300 package libraries per month, and the University of Texas has a large circulation of package libraries. In October, 1922, 911 packages were sent out by the University of Texas. The service now averages about 35 a day, each package being made up of magazines, bulletins, pamphlets, and books on subjects of lively interest to women's clubs, debating societies, parent and teacher organizations, and other similar groups. Some favorite subjects are restriction of immigration, the Ku Klux Klan, commission form of government, cancellation of war debts of the Allies, and the soldiers' bonus.

The University of Wisconsin lent 17,114 package libraries in 1920-1922, an increase of 53 per cent over 1914-1916.

ADULT EDUCATION.

Until recently it was commonly thought that if a State should educate its youth the problem of education was solved. But it has been found impossible to keep all of the youth in school long enough to receive a sufficient amount of education for efficient citizenship; and, in addition, on account of rapid progress and development in human affairs, education must be a lifelong process. Social, economic, political, and scientific conditions are constantly changing; hence the movement for adult education has arisen and is very rapidly developing.

And so it has come about that as a result of this newer movement in education, "to teach men—that is, adults—is now a genuine function of the modern university or other educational institution, and in our times through organized effort it becomes a challenge to leaders of men."

The institutions of learning are now practically committed to the policy of teaching adults not in residence at the institution, and the problem is now reduced to the forms for performing this service and its proper standardization. The movement has attained very significant proportions and has seemingly unlimited promise before it for the immediate future.

Adult education in England has taken shape largely under the influence of the Workers' Educational Association, founded in 1903. Instruction is carried on chiefly through the so-called university tutorial classes, which are organized in all parts of Great Britain.

Each class is conducted as a three-year course in some fundamental subject. A student joining such a course pledges himself to remain in the same class and under the same instructor for three years. At a given meeting the instructor delivers a brief lecture, which is followed by a discussion. Next comes criticism of papers submitted by the class, each member being required to present a carefully written paper every three weeks. The topics for these papers are selected or assigned with much care. The instructor also gives advice to the class concerning reading and supplementary studies that they should carry on in order to get the fullest benefit from the work.

The university tutorial classes cover a wide range of subjects, such as psychology, economics, political science, social history, social philosophy, industrial history, ethics, logic, music theory, biology, astronomy, other sciences, mathematics, English, French, German, Greek literature, comparative religions.

When it is planned to give a course in a town or city the organizers of the work often have several lectures on the subject of the course delivered beforehand in the community. The ground is in this way cultivated so that when the course is actually offered there is a certain interest in the subject that may be helpful in bringing together the requisite number of people to carry on the work. A class is limited to 32 persons. The total number of classes for the winter of 1921-22 was 320, with an enrollment of 7,750, the men numbering 4,729 and the women 2,091.

At Cambridge University the adult education board is made up of some of the most eminent men in the faculty. The present chairman is Prof. J. J. Thompson, one of the foremost physicists in the world. There is a similar board at each of the other English universities.

Another type of adult educational work carried on in England is known as "university extension." This is not a broadly inclusive term, as with us, but is applied to a particular type of educational work carried on extramurally by universities for adults. It is designed mainly for business men and women and for teachers. Like the Workers' Educational Association work it does not carry credit toward a degree and is usually nonvocational.

University extension courses of the typical sort in England are held from fall to spring. In a course the instructor lectures once a week to a general audience. After the lecture he meets for an hour the students who are formally registered in the work. During that hour a discussion takes place. He asks questions of the students, and they may question him. He lays out reading for students to do. Students hand in their weekly papers and receive those they

submitted the week before. A student pursuing successfully three of these annual courses in one general field receives a "diploma."

University extension courses are given in many centers and are taken by many people. The work is not so intensive as in the university tutorial classes. The total number of classes for the winter of 1921-22 was 500, with an enrollment of nearly 20,000.

Out of this movement in England, founded by Dr. Albert Mansbridge, who last year visited America, grew—

THE WORLD ASSOCIATION FOR ADULT EDUCATION

founded by him in 1918. The object, as stated in its official announcement, is to assist the development of adult education in all parts of the world, mainly by:

- The promotion of cooperation and mutual relationships between adult educational movements and institutions throughout the world.

- The development of a fully equipped bureau of information.

- The conduct of investigations of the nature, theory, and possibilities of adult education.

- The production and circulation of literature.

- The organization of international and other conferences.

The purpose of the World Association for Adult Education is to dispel the melancholy belief that grown men and women have nothing left to learn and to diffuse throughout all countries and in every section of society the sense of wonder and curiosity and the gift of mutual sympathy and companionship which add so much to the meaning of life.

It pursues this purpose of seeking to establish contact between all those, whoever and wherever they be, who hold fast to the belief that the true purpose of education, for young and old, is the understanding and enjoyment of life, and that the uneducated man is not he who can not read or write or count or spell but he who walks unseeing and unhearing, unaccompanied and unhappy, through the busy streets and glorious open spaces of life's infinite pilgrimage.

The instant response given to the proposal to establish a World Association for Adult Education is indicative of the intense desire of people everywhere for the development and organization of adult education on lines which are broad and free and which are open to men and women of any nationality and of any religious belief or political party.

It is becoming more and more widely recognized that the power generated as the direct result of men and women seeking simply, in their own way, to develop their natural interest, understanding, and knowledge is essential to the healthy life of any community.

At the moment the civilized world is insistent in its demand for instructed citizenship in order that it may preserve, develop, and reform its essential institutions.

The World Association for Adult Education has been founded in order to combine in the pursuit of a great ideal all those who are specially interested in adult education as a means to citizenship and world fellowship.

Many institutions in America, as the result of Doctor Mansbridge's visit here, have joined this association.

WORKERS' EDUCATIONAL BUREAU OF AMERICA.

From the Workers' Educational Association of England and the World's Association for Adult Education, and partially on account of the general movement in this country in educational extension, was organized the Workers' Educational Bureau of America, organized in New York City April 23, 1921, the second conference of which was held at the New School for Social Research in New York City April 22 and 23, 1922.

The following, taken from the report of the secretary of the Workers' Educational Bureau, 1922, gives some idea of the growth of this movement:

One year ago a nation-wide questionnaire sent out to the different workers' educational enterprises revealed the significant fact that four years before there were but four workers' educational groups in two industrial centers of the United States, with an enrollment of a few hundreds. In four years the movement has grown to 26 workers' colleges and schools, in 22 cities of this country. Since that questionnaire has been tabulated and recorded the Workers' Educational Bureau has come into being to relate these various experiments in different parts of the country, to gather and to stimulate the development of new enterprises.

Some of the enterprises that were in existence a year ago have become inactive during the past year, due to a number of different reasons. Others have come into being to swell the total number. It is difficult at times to classify the enterprises as either trade-union colleges, workers' universities, or study classes, as they do have local differences; but including all such experiments, whether they be regarded as individual workers' study classes or colleges with a definite board of control, the increase in the number of these experiments has been, on a conservative estimate, twofold, or 100 per cent. The total number ran as high at one time as 61 workers' educational experiments of various sorts and kinds. Of this total, the bureau has assisted in creating eight trade-union colleges during the past year.

These colleges are as follows:

- Passaic Trade Union College.
- Denver Labor College.
- Spokane Workers' College.
- Milwaukee Workers' College.
- Pacific Workers' University (Sacramento, Calif.).
- San Francisco Labor College.
- Syracuse Labor College.
- Portland Labor College.

EXTENSION ACTIVITIES OF AGRICULTURAL AND MECHANICAL COLLEGES.

All of the agricultural and mechanical colleges aided by Government funds conduct agricultural extension service, consisting of home and farm demonstration work, boys and girls' club work, agriculture and home economics work, and many other special forms. This is usually a cooperative effort of the college of agriculture, the United States Department of Agriculture, the State department of agriculture, the State board of education, and the county government.

The work varies somewhat in each State in accordance with the agricultural needs of the State, but is of similar character. A brief description of the work of one institution is given as typical of the work of them all:

EXTENSION WORK OF THE COLLEGE OF AGRICULTURE OF THE UNIVERSITY OF TENNESSEE.

The improved condition of Tennessee agriculture is reflected in the attitude of county courts toward the support of county farm demonstration agents and county home demonstration agents. July 1, 1921, the county force of the division of extension included 37 county agents, 3 assistant county agents, 27 home demonstration agents, 1 assistant home demonstration agent, and 9 negro agents. In December, 1922, our county force numbered 44 county agents, 7 assistant county agents, 27 home demonstration agents, 1 assistant home demonstration agent, and 10 negro agents—a net gain of 19 county workers over the lowest number employed at any one time of the period mentioned.

The outstanding features of extension work during this period have been the marked interest in the cooperative marketing of farm products, with the standardization of farm crops and the organization of farmers as a necessary part of this project, a greatly increased territory devoted to tobacco production, the steady increase of the dairy industry, and improvement in community, county, and district fairs.

The year has witnessed a gradual improvement in all phases of the live-stock industry, sheep husbandry showing strongest.

The county agents, men and women, constitute the chief field force of the division of extension. Their work is outlined in projects prepared by specialists in the several lines of agriculture and home interests, who aid them, as may be necessary in their work. Each agent makes a plan of work for the year, and in this the agents seek the advice of leading farmers and farm organizations. The county plan is flexible enough to admit of emergency work, should

any unusual condition demand attention. Weekly reports of agents' activities are made through supervising district agents to extension headquarters.

The following are examples from the many lines of work of the division of extension for the year ending December 31, 1922:

Over 100 of the 176 weekly newspapers of the State, and 8 of the 13 daily papers, printed over 20,000 columns of agricultural matter furnished them by the division of extension. In many cases special agricultural editions were printed, in which illustrations and much reading matter were supplied. Twelve new bulletins, totaling 108,000 copies, were issued, and reprints of 11 publications were made.

Approximately 15,000 acres of a better variety of cotton was grown, and a beginning was made in standardizing the cotton of a community, selecting a variety suited to it. The varieties chosen are Express and Cleveland Big Boll, with lint from $1\frac{1}{8}$ to $1\frac{1}{2}$ inches. Cooperative cotton selling pools were held in four counties with satisfactory results to the farmers.

There were 1,200 acres of Burley tobacco grown in Knox and adjacent counties, with yield and quality above the average in the Burley district. This is a new cash crop to these counties and is an outstanding piece of work.

A remarkable "Use More Milk" campaign was conducted in Davidson County May 1 to 6 under the direction of Miss Hall, of the dairy division of the United States Department of Agriculture and the division of extension, with the cooperation of an educational medical and civic organization and the milk producers and distributors of the county. A poster contest in which 1,000 posters were selected from the work of 10,000 contestants was a feature. Five 10-minute speeches were made in every schoolroom in the county. Over 25,000 children were taught the value of milk in the diet.

Cooperative wool-selling demonstrations were made in 18 counties, in which 147,525 pounds of wool were sold with a saving of \$14,348.75 to the consignors, who were taught proper tying of the fleece and grading. In 14 counties 22,196 lambs were sold cooperatively with a saving of \$19,457.75.

There were 160 boys and girls in 5 counties that fed 198 baby beeves. Nine carloads of these animals were exhibited at the Nashville Fat Stock Show December 12-14, the Montgomery County Club winning first prize. These exhibits and the boys and girls attending them were a leading feature of the show.

Two thousand acres of strawberries were planted in three counties as a commercial crop which had not previously grown the fruit for shipment, and associations for marketing were formed.

Two hundred and fifty pure-bred rams were placed in middle Tennessee counties, and a distinct advance has been made in sheep husbandry in that section. Twelve hundred head of Heresford calves were sold to Tennessee feeders in one sale at Nashville in November. There have been 149 pure-bred beef bulls placed with farmers during the year.

Three cooperative creameries have been established, making 15 in all, with 5,030 farmer patrons. In addition there are 14 privately owned creameries. The total output will be 12,000,000 pounds of butter for the year, as against 300,000 pounds in 1914. Thirteen cheese factories produced 237,218 pounds of cheese, an increase of 83.6 per cent over 1921.

Terracing demonstrations have been popular throughout the State and are an important feature of maintaining and improving the soil.

EXTENSION WORK OF THE NORMAL SCHOOLS.

Statistics for this report were not secured from the normal schools. Most of them, however, especially in the West, conduct some form of extension, the most general being correspondence courses, class instruction, lectures, and institutes. The following is a description of the extension work of the State Normal College, Natchitoches, La.:

The division of extension, Louisiana State Normal College, has been established for the sole purpose of aiding teachers, school officials, and communities fostering educational projects in Louisiana.

The extension activities are administered through the following departments of the division of extension: Correspondence study, extension classes, educational measurements, lectures and institutes, visual instruction, public school service, home reading courses (in collaboration with the Bureau of Education, Department of the Interior), alumni activities, appointment of teachers.

Data of correspondence study and extension classes.—Only professional subjects are offered, thus limiting the service almost wholly to teachers.

Number of students (teachers) enrolled in correspondence study, September, 1922.....	300
Number of students (teachers) enrolled in extension classes, September, 1922.....	129

Sex of students: Women, two-thirds; men, one-third.

Average academic standing of students in extension classes is the equivalent of a two-year normal-school diploma, or the sophomore class in the college.

All students in correspondence study have met the entrance requirements of the college and are therefore doing work of strict collegiate grade.

Data of visual instruction.—Visual aids (slides and films) are lent to churches, schools, and community centers free and on rental basis.

The department was established in 1920. Since that time the following percentages of increase have been noted: Films owned, 150 per cent; showings made, 300 per cent; people served, 125 per cent.

Home reading course.—People served, current year, 57.

OUTSTANDING DEVELOPMENTS IN UNIVERSITY EXTENSION, 1920-1922.

"Undoubtedly the most striking educational development of modern times is shown not by what is being done within schools and universities but by what is demanded by adult persons in all walks of life."—*George A. Smithson*—"The Spokesman," December, 1922, issue.

North Carolina.—University extension in the Southern States has reached outstanding prominence in the last two years. Probably the greatest accomplishments in adult education in these States have been in North Carolina, where the State university has pursued for a number of years a far-sighted policy of "bring the university to the people." This progressive educational policy has resulted in considerable popular interest throughout the State and in great financial gains to the university in increased State appropriations. Successful activities of the University of North Carolina are short extension courses in cities and towns of the State, welfare work, package libraries, and visual and correspondence instruction.

In North Carolina the most important progress was the enlargement of the teaching program—401 students were given formal instruction in 1921-22, as compared with 111 of the previous year, either through correspondence courses or extension classes out in the State. This number included 200 doctors, who took the post-graduate extension course in general medicine during the summer in 12 centers of the State.

A distinct feature of the work is the Community Drama, under which community pageants are written and enacted.

Florida.—More recent developments in a typical Southern State may be noted in Florida, where—immediately following the World War—a comprehensive system of correspondence, class, and visual instruction was established for both the University of Florida and the Florida State College for Women.

Mississippi.—University extension in Mississippi, conducted by the Agricultural and Mechanical College, has also made important progress after starting from a very small beginning.

Tennessee.—During the last year the University of Tennessee has appointed a director of general extension work. Previously the extension activities of that institution were almost entirely industrial.

Industrial subjects.—Instruction in industrial subjects has been an important part of the university extension activities of the following institutions: University of Wisconsin, Pennsylvania State College, University of California, Massachusetts State Department of Education, Iowa State College, University of Colorado. University of

Tennessee, Purdue University, and New Hampshire State Board of Education.

Recent extension work.—The following institutions of national reputation have recently established extension work: Lehigh University, South Bethlehem, Pa.; University of the State of New York, Albany, N. Y.; and Adelbert College (Western Reserve University), Cleveland, Ohio.

Pennsylvania.—There has been a unique development in university extension in Pennsylvania. Following the withdrawal of the University of Pittsburgh from this kind of activity, the State department of education has secured an appropriation for teacher training work, which is used for the financial support of university extension courses intended mainly for teachers. The instruction is practically free to teachers and is given by members of the faculties of colleges and universities in Pennsylvania, who are paid from State funds for this educational service.

Virginia.—The University of Virginia and the College of William and Mary inaugurated extension teaching classes in 1920. The enrollment this year, 1922, is more than 1,500. In Richmond the work is done cooperatively.

Correspondence courses at Columbia.—Another recent development in university extension work in the Eastern States has been the organization of correspondence instruction by Columbia University. This type of instruction includes only courses of college grade. Columbia University, however, allows no credit toward a degree for correspondence courses, but there is provision for granting credits on extension courses taken in classes.

Credit at Columbia.—Director Egbert announces that Columbia University has made provision for granting the degree of bachelor of science to "mature" undergraduate students who have been at the university for one full academic year or its equivalent and have completed courses in residence aggregating not less than 30 semester hours. To be recommended for this degree the student must have completed a total of 124 semester hours, 94 of which may have been taken in university extension classes. Thus students in university extension can now, under certain restrictions, receive a degree at Columbia University.

Indiana University.—Indiana University, through its school of nursing and its extension division, is continuing the health education campaign carried on in various parts of the State the past two years. This year the scope of the work is broadened, the activities are more varied, and the entire undertaking is called a "Nursing service." The primary purpose of the undertaking is to interest the

State in the work of the public health nurse and her relation to the solution of community health problems.

The field work is done by two graduate registered nurses, especially qualified for this type of undertaking. These nurses work in close touch with the director of the Indiana University School of Nursing. Arrangements for the work of the nurses in communities are made by the Indiana University Extension Division, and all requests for their services should be sent to the Extension Division, Indiana University, Bloomington, Ind.

Michigan.—The University of Michigan regards the state-wide health program in cooperation with the State medical society, the State dental society, and the State board of health as the most novel and important feature of its extension work during the biennium.

Standardizing credits.—A. H. Yoder, director of extension of the University of North Dakota, says:

It seems to me that the most important events in the past two years in our field are:

- (1) The effort made by the members of the National University Extension Association toward standardizing credits obtained by correspondence, and—
- (2) The organization of the World Association for Adult Education.

Most of our American extension divisions do not sufficiently emphasize the importance of adult education. In the future the extension division will either make adult education its chief aim or the universities will organize a special division for the purpose. I want to see the type of work now done carried with the work which we hope to do in the way of adult education. The question of "staying educated" looms large to my vision, and it is in this field that I think our greatest success will come.

WORKERS' EDUCATION.

Robert T. Hill, in the New York Times, says:

Uncertainty in the minds of many as to the direction that the worker's education movement in America will take is such that recent developments at Syracuse, N. Y., are peculiarly suggestive. According to competent observers, the strength and vitality of workers' education chiefly depend upon the desire and active participation of working people in such effort. It is largely group action extended into the field of voluntary adult education. Others believe that through extension service, colleges and universities can provide adequate educational facilities for everyone, including workers, and that such educational effort should be strictly under university or college initiation, direction, and control and conducted similarly to other extension service. The truth, in fact, appears to lie between, or in a suitable combination, of both. A type of co-operative effort such as that at Syracuse seems reasonable and hopeful.

Representatives of the State Department of Education and the Workers' Education Bureau of New York were privileged to act as liaison officers, so to speak, between representatives of the Central Trades and Labor Assembly and faculty members of Syracuse University. The director of university extension teaching at Syracuse was chiefly instrumental in arranging these conferences. Committees were appointed from the respective faculty and

labor groups which met to discuss possible cooperation. This meeting went a long way in breaking down antagonisms and feelings of aloofness between university and so-called working people.

Upon request of the labor committee tentative courses of study were prepared by faculty representatives, of which one in economics was adopted for the season. Responsibility for organization of a class, including the payment of instructor's fee, was assumed by the labor organization. Those enrolled were registered as students in the extension division of the university. Weekly sessions were held at the Labor Temple. Interest and attendance were maintained throughout the course, which continued during the spring term last year. At the conclusion of the season it was decided to continue similar effort this year, with the addition of such other courses as might be feasible. A movement of this cooperative type once started has indefinite possibilities.

This effort has much in common with similar developments in England 15 or 20 years ago, when the Workers' Education Association was in its infancy. Somewhat similar cooperative effort was undertaken by Oxford University and working people who desired educational opportunities. Albert Mansbridge, one of the founders of the English movement, when in the United States last spring, pronounced the Syracuse scheme one of the most hopeful and significant educational developments in this field which he had encountered in America.

The following paragraph is taken from the annual report of Director Egbert, of Columbia University:

As indicated in the report of last year, university extension is giving special study to the best method of making the university useful to the labor unions. We are meeting the needs of the individual worker, of whom there are many among the thousands who attend our courses; nevertheless, it is our desire to solve this problem of furnishing the education which labor unions feel that they need for their members. It is a pity that they do not have greater confidence in universities such as Columbia. I can only report progress in this important field of endeavor.

Widespread comment has been aroused by this interest on the part of Columbia in the educational welfare of the labor unions. We now propose a conference of those representing the unions with the administrative board of university extension in the hope that some step may be taken in bringing the university and the unions in closer contact for the accomplishment of the purpose for which the extension courses exist.

RADIO EDUCATION.

The radio and education.—Among the many possibilities opened to the world by the development of radiophony, the educational opportunities which are offered to the public by means of the radio are most important and far-reaching. Not only the possibility of receiving instruction from the finest teachers in the country, but the cultural opportunities made available by the perfection of radio means much to thousands of people who have installed outfits.

Universities have recognized the great good to be gained by sending instruction over the ether waves, and are using the radio as a

medium for extension courses. Operatic and symphony concerts, the day's news, market and weather reports, all the things which go to make life rich in experience can now be dispensed through the air to all who will listen.

This is a big advantage to everyone, but it is particularly valuable to those people who live in remote districts, in villages, and rural communities. The radio now brings into their homes the news and entertainment, instruction and culture, from which they have been cut off by distance.

The University of Michigan has organized a complete radio extension course of subjects of universal interest. Michigan Agricultural College will broadcast a series of lectures by agricultural authorities on subjects of vital interest and great practical value to farmers. The possibility of gaining a wealth of practical information from men of national reputation by merely "listening in" is of great value to the millions who have never had the opportunity to receive such information before.

In November, 1922, in the United States 57 colleges and universities were reported as having telephone broadcasting stations, amongst them the University of Colorado, University of Arizona, University of California, Tulane University, University of Missouri, Purdue University, University of Vermont, University of Texas, Cornell University, University of South Dakota, Ohio State University, University of Nebraska, University of Wisconsin, State University of Iowa, University of Cincinnati, West Virginia University, Iowa State College, and the University of Illinois.

Government radio school talks.—To reach the general public, as well as school workers, with educational information, and to spread it promptly, cheaply, and widely, the United States Bureau of Education sends out messages twice a week from NAA, the naval aircraft station at Radio, near Arlington, Va., on a wave length of 700 meters.

The Commissioner of Education believes:

That the public can be reached more quickly and directly by radio than in any other way.

Radio has the advantage of intimate contact between speaker and audience, and since the bureau's messages will be sent on a regular schedule, they will have the continuity necessary for informing the public on educational matters. Since public education can not progress any faster than the state of public opinion about education, the commissioner believes that the inauguration of the radio is an important step in advance.

Other Government bureaus broadcast educational information.

Plan to broadcast college courses.—Foreseeing millions of listeners, the bulk of them of college age, the National Radio Chamber

of Commerce is developing a plan to establish radio-extension courses in American colleges and universities. In radio, education has found a new and powerful ally.

Sixty educational institutions are broadcasting educational and musical programs, 47 of them being colleges and universities. The combined area nominally covered by these institutions has been estimated to be seven or eight times the total area of the United States.

There are in the United States between a million and a million and a half radio receivers, representing between three and four million radio listeners located within comfortable range of the speaker's voice of 1 of 600 broadcasting stations. These listeners are, for the most part, of school and college age. Their number is rapidly increasing and will undoubtedly, within a few years, total many millions.

CHAPTER VIII.

UNIVERSITY SUMMER SCHOOLS.

By JAMES C. EGBERT.

CONTENTS.—Origin of the summer school—Classification of summer schools—Registration—Length of session—Financial conduct and fees—Salaries of professors and selection of staff—Administration and studies—Recreational work—Appreciation of summer schools.

During the past 25 years a very significant change has taken place in the attitude of those in control of educational institutions toward the so-called summer season—specifically the months of July and August—as deserving a place in the academic year or calendar.

Formerly the extreme heat so common in many parts of the country was regarded as sufficient interference with study to justify the suspension of the activities familiar to other periods of the year. Beyond this there certainly existed a prevalent and widespread opinion that both pupils and teachers needed the relaxation which an interruption of academic duties furnished, and that this period should cover the two months of the warm season. In all probability this custom arose from the fact that the summer months were the busy time for the countryside and a period when young people were needed on the farm. The winter could readily be given over to educational work.

ORIGIN OF THE SUMMER SCHOOL.

The recognition of the summer season for educational purposes may be traced to the organization of summer schools not directly connected with collegiate institutions. The summer schools at Chautauqua and at Marthas Vineyard, although combining recreational with educational exercises, were largely instrumental in producing a change in opinion as to the usefulness and feasibility of the summer for educational activity. Gradually the fact of the loss of valuable time due to an extended vacation period became clear to the eager student who was finding the years of collegiate study too numerous in view of the necessity of beginning one's chosen career at an earlier period. In like manner students, especially teachers busily engaged during the winter on remunerative employment, came to regard the summer season as the time for study, of which they were deprived at other seasons of the year. Undoubtedly the rapid extension of the interest in summer instruction was strengthened also, particularly in the West, by the action of the University of Chicago in adopting what may be termed "the perennial system," whereby the institution maintained educational exercises throughout the entire calendar year. This is the story of the origin of the summer school.

It is interesting to note that the universities were the first to see the importance of the use of the summer season as indicated by the experience of what we may term the "recreational summer school." Harvard University was probably the pioneer, for the courses offered by Dean Shaler were the first collegiate instruction assigned to the summer season. Other universities, notably Columbia University, soon after established summer courses, and, exceeding Harvard in the liberality of recognition of such courses as giving credit for the degrees, early made their summer instruction an integral part of the work of the year.

The idea, therefore, has had an ever-increasing acceptance in the universities of the country. It has spread more slowly, however, to other educational institutions, such as normal schools and other institutions under public control. Nevertheless, there is a general acceptance of the idea, and the custom may now be said to be prevalent, especially in the more important institutions of learning. This is not true, however, of the secondary and elementary schools, as the practice varies widely in different communities. It is most unusual to find the graded schools following a winter program in the summer. One important reason for this is the eagerness of teachers to enter the university summer schools from which they would be excluded if their own graded schools were open as usual during this season.

The severity of summer weather does not permit school exercises which are familiar to the other seasons. In consequence, wherever elementary schools are open the program is very brief and the character less serious than is the custom at other times of the year. The modified program is appropriate for these summer public schools.

CLASSIFICATION OF SUMMER SCHOOLS.

When we attempt to classify summer schools we find great difficulty. Nevertheless, we may follow the usual classification of university and collegiate institutions, normal schools, schools independent of established educational institutions, and finally the secondary and elementary schools which furnish education at public expense. Of these I have already referred to the graded and secondary schools. The so-called "independent schools" frequently offer summer sessions but only when there is a special demand and when this demand will furnish means for the maintenance of the school or for profit. Many preparatory schools are open in the summer so as to meet the needs of students who hope to pass entrance examinations in the fall. Normal schools in some States supported at public expense are open in summer, especially where the teachers need further professional instruction and are unable to attend the universities or to find in them the courses which they need.

We shall confine ourselves in this paper to a consideration of the educational activity in the summer of the universities and colleges.

Although the theory of summer instruction as appropriate and advantageous for universities and colleges is so widely accepted, nevertheless, the practice has not become universal. Some of our best-known colleges do not open their doors to the summer student. Among these we may mention Yale, Princeton, Vassar, Brown, and many others. They close their doors after commencement, not to open them until the fall term begins. This is the old-time view of the period when colleges are to be active. It is true that Yale tried the experiment for three years and then resolved to abandon the undertaking.

It is interesting to note, however, that a number of the most conservative colleges are establishing in the summer courses of lectures and forms of instruction which are not familiar to the winter student. Williams College conducted in the summer of 1921 a series of conferences on government in which a number of distinguished scholars and publicists took part. This experiment will be repeated in the summer of 1922. The conferences in general were open to the public although the round tables for more intimate discussions were restricted to registered members. It is understood that the expense does not fall upon the college but is met by the generosity of a private individual. Amherst College has been interested in the summer in the Amherst School for Workers. This is an endeavor to bring the industrial worker into close contact with the college. Bryn Mawr in like manner is conducting in the summer classes for working women clearly with the same intention which is responsible for the courses at Amherst. Thus these institutions are turning to the use of the summer season although as yet there is apparently no thought of giving regular courses similar to those of the academic year.

The reasons for hesitation on the part of many colleges in continuing their academic year into the summer are not very difficult to discover. There exists a natural anxiety as to the possibility of meeting the expense of such an experiment for the trustees of these institutions do not look with equanimity upon increasing the financial burdens of the academic year by losses incurred during the summer. This is a perfectly reasonable ground for hesitation as the tuition fees obtained in the smaller colleges would with difficulty, if at all, be made to cover the overhead expense and the cost of instruction. The larger universities can draw to their halls an unusual number of students and by the means of numbers care for the expense of summer instruction although in many cases the overhead charges must be met from the general university income.

Again, there are many colleges located in sections where the weather is especially severe and debilitating. We must acknowledge that students will avoid those places where the heat becomes well-nigh unendurable and therefore interferes with their routine of study and attendance on lectures. Students do not shun in the winter country towns which are frequently overwhelmed by the snows and rigors of the season but will avoid the same localities which are made uncomfortable by the heat of summer.

This general impression that the debilitating character of the weather would interfere with the amount of study the student could undertake not only prevented the rapid development of summer schools but produced unwillingness on the part of the university authorities to recognize this period of study as worthy of academic credit. As the number of summer schools increased, this opinion changed, and universities of standing accepted credits obtained in summer terms, both of their own and of institutions in which they have confidence, in the same manner as during the academic year. We can appreciate best the position which summer schools have secured in university work when we note the readiness with which credit is granted, especially for the master's degree and at times for the degree of doctor of philosophy.

REGISTRATION.

The registration in these summer schools has been steadily increasing and in some instances has reached remarkable proportions. Thus, in 1921, Columbia reported 11,809; Chicago, 6,452; California, with its southern branch, 7,877; and Wisconsin, 4,535. These are the largest and are followed by Michigan with 2,794. We should expect to find Columbia and California on this list as being the largest universities in the country.

In the summer of 1917, because of the war, the summer schools uniformly experienced a large diminution in numbers. This will be seen in the table given below. In certain special instances the numbers were maintained or increased by the acceptance and enrollment of students who were preparing for service in the Army or Navy. This interruption in the growth of numbers was regarded by some with solicitude. Nevertheless, in the summer after the close of the war there was an immediate return to pre-war conditions and the yearly record showed increases as before.

In November, 1917, the administrative officers of summer schools meeting at the University of Michigan established an informal organization entitled, "The Association of Summer Session Directors." The invitation had been extended to all universities offering graduate courses in the summer. At this first meeting the following institutions were invited: Boston University, University of California, University of Colorado, Columbia University, University of Chicago, Cornell University, Dartmouth College, Harvard University, Indiana University, University of Illinois, Johns Hopkins University, Iowa State

College, University of Kansas, University of Minnesota, University of Missouri, University of Montana, University of Nebraska, New York University, Northwestern University, Ohio State University, University of Oklahoma, University of Pennsylvania, Syracuse University, University of Washington, and the University of Wisconsin.

Thus, including the University of Michigan, 26 institutions were asked to participate in the organization meeting. Only 14 responded by sending representatives, viz: Boston University, Columbia University, Indiana University, Harvard University, New York University, Northwestern University, Ohio State University, Syracuse University, University of Chicago, University of Illinois, University of Kansas, University of Michigan, University of Missouri, and the University of Minnesota.

This list is given so as to indicate the number of institutions holding summer schools in the year 1917 and those which were particularly interested in unified action.

The following table indicates the enrollment for the years 1917-1922 of the universities and colleges maintaining summer schools:

Summer session attendance (totals without duplicates).¹

Institution	1916	1917	1918	1919	1920	1921	1922
Boston.....	201	227	252	383	558	673	964
California.....	3,975	4,504	4,683	4,218	5,436	7,877	8,698
Chicago.....	5,401	1,643	3,827	4,956	5,409	6,452	6,470
Colorado.....	833	771	674	1,648	1,741	2,308	3,138
Columbia.....	8,023	6,144	6,022	9,539	9,780	11,809	12,567
Cornell.....	1,631	1,239	1,186	2,171	2,007	2,557	2,148
George Washington...	166	240	308	668	1,033	1,342	1,223
Harvard.....	1,044	771	1,245	1,723	1,709	2,024	2,390
Illinois.....	1,117	883	748	1,314	1,381	1,976	2,165
Indiana.....	1,131	983	1,081	1,222	1,452	1,648	1,858
Iowa.....	676	802	1,042	1,290	1,420	1,747	2,083
Iowa State.....	1,028	725	614	800	865	1,305	1,487
Johns Hopkins.....	596	518	326	422	442	949	785
Kansas.....	816	738	761	712	932	1,306	1,660
Michigan.....	1,793	1,419	1,301	1,061	2,225	2,794	2,803
Minnesota.....	1,067	983	1,245	1,467	2,025	2,687	3,174
Missouri.....	1,320	556	725	763	885	1,134	1,262
Nebraska.....	665	656	820	867	1,582	2,400	2,400
New York.....	1,053	972	618	1,350	1,730	2,005	1,813
Northwestern.....	406	429	513	881	1,159	1,422	1,581
Ohio.....	1,181	904	911	1,340	1,404	1,543	1,870
Oklahoma.....	864	1,133	1,170	1,545	1,608	1,660	2,130
Oregon.....	115	604	489	712	571	892	832
Pennsylvania.....	1,045	853	None	935	1,281	1,758	1,977
Syracuse.....	366	343	357	493	610	715	775
Texas.....	1,477	1,369	1,592	1,800	1,955	2,588	2,900
Toronto.....	354	17	50	35	85	140	194
Virginia.....	1,389	1,320	918	1,474	1,816	2,429	2,664
Washington.....					1,608	1,929	1,960
Wisconsin.....	3,141	2,344	2,083	3,212	3,578	4,535	4,724

¹ Furnished by the Association of Summer Session Directors.

LENGTH OF SESSION.

Regarding these institutions as representing the summer schools of the country, we may say at once that the important outstanding fact of the summer session of to-day is its accepted regularity as a part of university work. In fact, these schools have become integral parts of the extended academic year of university and collegiate education in the country. They form an added term. Thus there is an approach to the plan of academic year which brings it close to the calendar year.

Notwithstanding these facts, there are many inherent differences in the form, organization, and conduct of these schools which vary among themselves more widely than the parent institutions of which they form a part.

The first difference is that of length of period of the session or term. In this variation in the length of the session we can see pictured the different theories as to the character of the summer instruction. There are three types: First, the short intensive course with daily instruction and restricted programs; second, a similar plan, but combined with an attempt at approximation to the calendar of the academic year; and finally, a session arranged as a complete term, equivalent to those of the winter season as opposed to that of the summer.

In a list of 18 universities, 9 have a 6-week session, 3 have 8, 1 has 9, 1 has 11, and 1 has $8\frac{1}{2}$ weeks for the general session and 11 for education and law. Another has 10 weeks for law, 8 for general courses, and 6 for medical courses. Two have two sections of the summer. Of these, 1 has 6 weeks in the first section and 5 in the second; the other has 6 weeks in each section respectively.

FINANCIAL CONDUCT AND FEES.

The financial conduct of summer schools is a matter of peculiar interest to the boards of trustees and regents who are responsible for the management of the funds and who are always anxious in the face of possible deficits.

In a group of 22 universities and colleges, 9 have summer schools which are self-supporting, while 13 are not. Of the former only 2 are State universities, while of the latter 2 are private institutions. In other words, private institutions must hesitate to establish summer schools which add to their financial difficulties. State universities, on the other hand, regard the matter in a totally different light, for legislatures are called upon to supply funds for the summer as for other parts of the academic year. In the latter case, although a fee is usually charged, it is purposely kept at a low figure, as there is no endeavor to make the school self-supporting. On the other hand, endowed institutions must arrange their summer expense and obtain suitable income so as to accomplish this result or there must be reliance on the general budget. Practice varies in the matter of overhead charges of the summer. Some universities charge this expense as a whole against the general budget of the university—others prorate the expense and endeavor to meet this amount from the income of the fees of this season. One university, endeavoring to reach an equitable adjustment, compares the expenses of overhead of the six weeks of the summer school with those of the following six weeks when no classes are held. The difference is charged against the

summer account. The largest institutions naturally show the largest amounts in the budgets assigned to the summer term, although the size of the institution is not always a determining factor. Taking the figures of 1919 we note that of 17 universities the budgets run from \$9,500 to \$132,000. Nine finished the season with a deficit running from \$600 to \$27,000. The remainder show a balance from \$1,000 to \$78,000. In preparing a budget careful consideration is given to the income side of the account which depends upon the system of tuition fees and to the method of compensation for instruction. There is no normal uniform system in the assigning of tuition fees. Here, again, the custom seems to follow the line of division between the State and private institutions. Of 23 universities, 16 have flat fees which are small in State universities, \$5 to \$25, but much larger in endowed institutions, \$40 to \$60. Only 6 set their fees on the basis of the unit, which varies from \$5 to \$10 and in one instance is \$16. One university charges \$3 for a single course. Eight follow the custom and adopt the amounts of the academic year. These are, however, on the unit basis. In some instances a definite university or overhead fee is charged. The whole tendency is toward an increased fee, following in this respect the action of universities in the past few years in raising their fees for the winter terms. In fact the summer fees are based on the same principle as controls during the academic year.

We may illustrate the variation in fees by referring to certain institutions which have important summer schools. Thus Columbia charges \$8 per point with a university fee of \$6. Cornell has a flat fee of \$40. Harvard has a flat fee of \$25. Syracuse charges \$5 per point. On the other hand, the University of California has a flat fee of \$25; the University of Illinois, \$12; the University of Kansas, \$10 for State residents, \$15 for nonresidents; the University of Michigan the flat fee of \$30, with special courses costing from \$30 to to \$75. The University of Wisconsin has a rate of \$3 per week as a flat fee.

SALARIES OF PROFESSORS AND SELECTION OF STAFF.

The question of salaries is very important in the conduct of these schools in the summer. Even at this time, when the value of summer work is generally recognized, it would be exceedingly difficult to obtain from trustees the permission to continue and maintain them if the salaries were increased in such a manner as to cause a serious deficit. In the early history of this movement the salaries were not in proportion to those offered in the regular academic courses. They were in comparison quite small, but the amount of service required was likewise kept in proportion less than the normal. There is much variety in the different universities as to the system and schedule of salaries. A favorite method is to determine the summer salary

according to the grade or rank of the instructor. Another method is to offer a percentage of the salary of the year. The result is the same as a rule, for the grade thus ultimately determines the salary. A certain amount of freedom is claimed by those who control summer sessions in the assignment of compensation, particularly for those members of the staff called from other institutions. It is customary to regulate the salaries of those from other colleges on the system of rank held by the instructor in his home institution, but this is not uniformly observed. In studying this question of salaries, illustrations will again be helpful. Columbia assigns one-sixth of the annual salary. Hence a professor receives \$1,000; an associate professor, \$750; an assistant professor, \$500; an instructor, \$335; and an assistant, \$165. Harvard sets aside one-twelfth of the annual salary for one course, one-seventh for two courses. Indiana gives 17 per cent of the annual salary; the University of Kansas, one-sixth, with a maximum of \$500; the University of Michigan, determining from rank, gives \$850 to \$900 to those of the rank of professor, \$675 to associate professors, \$550 to assistant professors, and \$425 to instructors. Syracuse gives 14 per cent of the annual salary, with \$360 as a maximum for professors. Wisconsin gives 15 per cent of the annual salary, with \$600 as the maximum for the professorial positions. California varies the amounts according to rank and institution from which the instructors come. The salary of a professor may range from \$700 to \$400; that of an associate professor from \$600 to \$350; that of an assistant professor from \$400 to \$300. An instructor receives \$250 and an assistant, \$200. In general, the salaries of the universities in their summer schools range from a maximum of \$1,000 to a minimum of \$400 for professors, from \$750 to \$300 for associate professors, from \$500 to \$250 for assistant professors, from \$400 to \$180 for instructors, and from \$250 to \$100 for assistants. We may say in general that the endeavor is to approximate the salary rate of the year, although in some instances where a deficit must be avoided the amounts are less in proportion.

The question of the selection of the staff for summer session instruction is a different problem from that encountered in determining the permanent personnel of the university concerned. Universities uniformly draw their force of instructors for the summer from their own staffs, and when this is impossible they search for the best available material to fill the vacancies. In some institutions an endeavor was at first made to include summer instruction as part of the yearly duties of the incumbent. This theory has never been generally accepted. Of course, the perennial universities have an entirely different system whereby vacations are based on a plan of alternation. This is the well-known Chicago University plan. The fact that institutions do not regard summer instruction as part of the

academic service for which the annual salary is paid gives officers of instruction the opportunity to accept invitations for summer service elsewhere.

Other universities select one-half or one-third of the force from outside, as they regard the summer as an unusually favorable time when visiting professors may become part of the staff. The University of California follows a custom which is now well known and calls instructors from outside its own walls. There is much to be said in favor of this custom. Persistent and continuous service in one institution has objections which are generally recognized, and the arrangement made by some institutions for the exchange of professors is intended to obviate the difficulties which are inherent in an uninterrupted term of service. The summer courses offer an extraordinary opportunity for this change which is so desirable. The mutual acquaintance of scholars and teachers has been increased by this interchange in summer service. Again, some institutions use this time for testing those whom they are considering as possible permanent accessions to their staff.

ADMINISTRATION AND STUDIES.

In the matter of administration, the origin of the summer term and its early isolation and identity as a school or separate department have determined the form which this has assumed. The administrative head is a dean or director, who is given definite control under the president. In a number of instances the director has the assistance of a committee or administrative board of which he is a member or chairman. The director or dean is given in some instances extraordinary power under the president and is recognized as a most important administrator, being a member *ex officio* of the highest university bodies. His functions are to arrange through the departments all details as to instructing force, to prepare the budget and plan of study and to select the courses offered. He is responsible for all publications and announcements, and for the distribution of the same. He presents the annual budget of the summer term to the trustees or regents, and is in every way the supreme administrative head of this part of the university work. The administration of the summer school is, therefore, very simple and does not call for any faculty action—the only approach to this being the committee or administrative board, which is a species of cabinet for the summer executive.

Finally, the range of studies and of courses in summer schools is a subject of peculiar interest and weight. Primarily there is evidently no intention to go below the freshman year in the general courses in the liberal arts and sciences. Nevertheless, many universities offer

courses in such subjects as English, mathematics, Latin, and certain modern languages—German, French, and Spanish—which are preliminary to the freshman year and may even be classed as beginners' courses. These are not intended as a substitute for secondary school work, but are used by mature students and those who desire to complete an imperfect preparatory career. There is a distinct endeavor to prevent the summer schools in universities from becoming normal schools, although a large proportion of the student body consists of teachers of every grade and department. The summer is regarded as the time when teachers may come in contact with the subject matter in the college curriculum, and also with the more advanced treatment of subjects which belong to their own profession. It is for this reason that much attention is given to courses for graduate students, although it is frequently held that a summer session of 6 weeks does not give opportunity for individual investigation and research work. Notwithstanding this opinion, laboratory courses restricted in number and intensive in character can be distinctly valuable in the way of research. The continued and growing interest in graduate work in the universities in the summer and the general recognition which it is now receiving are clear evidence of its value. In general, summer courses of instruction are devoted principally to the liberal arts and sciences and to education. Commercial courses have an important place, and in a few institutions engineering and architecture are offered. Graduate courses are given in many of the larger summer schools at times set aside in separate departments or given in general with liberal arts courses.

Students in the summer very often seek this time for transfer to institutions different from those to which they owe first allegiance. Hence the geographical distribution is an interesting study. In certain large city universities, such as Chicago, Columbia, and Pennsylvania, the student body comes from all the States of the Union and from many foreign countries. State universities, however, as a rule serve the constituency of the State to which they belong. The exceptions among the State universities are California, Michigan, and Wisconsin, which have students from many other States and from foreign countries.

The principle of extension classes given at a distance from the parent university does not enter into summer instruction. Nevertheless, engineering camps and biological stations are often established at appropriate places. In some instances these are placed under the administration of the summer school. In other cases where they are not under such supervision they form special departments under general university control.

RECREATIONAL WORK.

With the desire to make summer instruction popular and to induce students in a perfectly reasonable way to use this time of year for study, officers in charge of summer schools have felt that it was appropriate to give entertainments, concerts, and plays for which the season is particularly adapted. These exercises not only give suitable relaxation but prevent the interference by other outside influences which particularly in a great city serve to distract the attention of those who are unfamiliar with their surroundings and the allurements associated therewith. In an endeavor to check any unfortunate tendency from the giving of these plays and entertainments, those in charge have insisted upon the intellectual character of these exercises. Hence lectures of a more popular type, recitals, and concerts have been employed for this purpose. Excursions which are announced in many summer school circulars are likewise due to the opportunity which the summer season offers for such attractive variation in the usual program. In this season, particularly in the larger cities, opportunity is afforded to study economic and social problems through excursions and visits to factories, philanthropic institutions, and places of historic interest. These being of an educational character have been regarded as of considerable value both as intellectual exercises and recreational activities. Naturally, no interference with class exercises is allowed, but these excursions are treated as supplementary to the ordinary courses of instruction. The same restraint is observed in regard to purely social events, which seem particularly desired by students of the summer season. In all these entertainments, excursions, and social events we see the substitute for the extra curricular activity which has so large a part in the academic year. Of course athletic contests and exercises are quite uncommon in the summer. The advantage of this is so fully appreciated that other extra curricular activity will not be allowed to interrupt the studious habits of the students of the summer term.

APPRECIATION OF SUMMER SCHOOLS.

Summer schools and summer sessions form, therefore, a distinct part of university organization in this country. We can see in their origin, which we may regard as a mark of progress in the development of university education, the working of the forces which have tended to shorten the period hitherto devoted to cultural studies and also as a concomitant idea the employing of the entire year by higher institutions of learning. These same forces are responsible for the peculiar system of yearly activity on an alternate term basis, as at Chicago, and for the combined courses which, as at Columbia, enable a student to count as one of his collegiate years the first year devoted

to professional study. A very clever substitute for the summer term of a length similar to that of the winter season was found in the short term of six or eight weeks and the limited and intensive program which gives the student daily contact with the instructor and daily recitation and lecture hours. This short intensive summer term is responsible for the theory which many now hold that our collegiate study would be much more thorough and the results more satisfactory were the intensive restricted plan used in the normal college year. At all events the deleterious effects which are attributed to the elective system, which enables a student to form heterogeneous combinations, would be avoided by the system now employed in the schools which have short terms with intensive restricted programs.

As has been shown above, summer study is largely confined to the courses which form part of the liberal arts and sciences as given in the usual collegiate career. Professional schools in many universities have not as yet afforded opportunity for study in the summer. The professional schools of education are an exception. They have the largest number of students, exceeding in many instances the enrollment in the arts and sciences. Law schools are offering courses which count for their degrees, and in some institutions schools of medicine and dentistry are following the example of the schools of law. Short courses for practitioners in medicine and dentistry are found in some instances in the early summer and even in the usual summer term, although serious difficulties are encountered in the conduct of medical schools in warm weather, particularly in the dissecting rooms of the department of anatomy.

Notwithstanding the hesitation which is shown by some professional schools and accepting the objections which are presented by the colleges largely influenced by tradition, the development of summer educational work has been such as to indicate that it is not improbable that colleges in general will feel the necessity of adopting some form of summer term. The idleness of valuable educational plants and equipment and the need of making shorter the traditional collegiate career are influences which will certainly press in the direction of the summer term. It is probable that this will not duplicate the terms of the winter season in arrangement and classification of studies. The institution itself, however, will not be completely abandoned by instructors and students as at present, but will serve a useful purpose throughout the year in the way of accomplishing the object for which it exists. The summer school belongs to the modern days and its organization and existence have brought many suggestions and progressive ideas into the conduct of university and collegiate education.

CHAPTER IX.

ENGINEERING EDUCATION AFTER THE WAR.

By ARTHUR M. GREENE, JR.

The period covered by this paper followed the demobilization of that experiment in education under war conditions known as the Students' Army Training Corps.

During the early part of 1917 many engineering students withdrew from the school of engineering to enter different branches of the Army and Navy of the United States, and others at this time, and even during the previous years from the outbreak of the World War in 1914, withdrew to enter the service of our allies or to become Red Cross drivers or workers. These withdrawals, followed by withdrawals due to the application of the Selective Service Draft Law, made it clear that steps must be taken to provide the Nation with men trained in engineering to fill the numerous places created by the war in the service of the United States and in the industries.

For the purpose of conserving the engineers in training, the Engineer Corps of the United States Army made provision to enlist engineering students of the proper age in a Reserve Officers' Corps and to assign them back to their colleges to complete their engineering work. This did not prove entirely satisfactory, and its inadequacy was soon manifest. To care for all branches of the service, and to train men as officers, the colleges and universities of the country were organized to receive and train members of the Students' Army Training Corps.

STUDENTS' ARMY TRAINING CORPS.

During the summer of 1918 it became evident that, with the application of the selective draft law, steps would have to be taken to preserve the educational institutions of the country and to supply the country with trained men. After a number of conferences between educators and Government officers, the War Department organized a Committee on Education and Special Training, consisting of Col. Robert I. Rees, General Staff Corps; Col. John H. Wigmore, Provost Marshal General's Office; Lieut. Col. Grenville Clark, Adjutant General's Office; and Maj. Wm. R. Orton, War Plans Division, with Ralph Barton Perry as executive secretary. In addition to this committee, an advisory board representing the educational interests was formed, composed of President James R. Angell, Samuel P. Capen, James W. Dietz, Hugh Frayne, Charles R.

Mann, Raymond H. Pearson, and Herman Schneider. About the end of July, 1918, after plans were prepared for the use of the colleges, the Secretary of War appointed President R. C. Maclaurin, of the Massachusetts Institute of Technology, Director of College Training. The country was divided into 12 districts for this purpose, with a subdirector in each district. Practically all of the colleges of the United States entered into contracts with the Government to give instruction to men who were to be members of the Students' Army Training Corps. The various institutions made contracts for the subsistence, housing, and education of members of this corps, together with contracts for expenses connected with the construction of temporary buildings or making alterations in existing buildings belonging to the colleges, for the purpose of fitting them to the needs of the Government.

The Students' Army Training Corps was raised under authority of the act of Congress approved May 18, 1917, commonly known as the Selective Service Act, authorizing the President to increase temporarily the Military Establishment of the United States as amended by the act of August 31, 1918, and under General Order No. 79 of the War Department dated August 24, 1918, which was as follows:

Under the authority conferred by sections 1, 2, 8, and 9 of the act of Congress authorizing the President to increase temporarily the Military Establishment of the United States, approved May 18, 1917, the President directs that for the period of the existing emergency there shall be maintained by voluntary induction and draft a Students' Army Training Corps. Units of this corps will be authorized by the Secretary of War at educational institutions that meet the requirements laid down in special regulations.

The object of establishing the Students' Army Training Corps was to utilize effectively the plant, equipment, and organization of the colleges for selecting and training officer candidates and technical experts for service in the existing emergency. For purposes of military organization the members of the corps formed single units, but for purposes of instruction the unit consisted of one or more sections, according to the type of educational training given.

The collegiate section (known as section A) was authorized in any civil educational institution which required for admission to its regular curricula graduation from a standard four-year secondary school or an equivalent, and provided a general or professional curriculum covering at least two years of not less than 32 weeks each and had a student attendance sufficient to maintain a collegiate section of a strength of at least 100 men. Collegiate sections of the Students' Army Training Corps were organized in colleges of arts and sciences, technology, engineering, mines, agriculture and forestry, business administration, industry and commerce, pharmacy, veter-

inary medicine, education, law, medicine, dentistry and in graduate schools, normal schools, junior colleges, and technical institutes.

The vocational section (known as section B) was authorized in institutions having adequate equipment.

A registrant of the Students' Army Training Corps became an enlisted man in the Army of the United States, or, on the establishment of naval units, in the Navy of the United States. This induction was voluntary, under the selective service regulations. Upon induction members of the Students' Army Training Corps were placed on active duty status, and the Committee on Education and Special Training entered into contracts with educational institutions for the quartering, subsistence, and instruction of such men. It was also understood that from time to time members of the corps might be assigned to training camps, training schools, depot brigades, or to do special technical work at collegiate institutions. It was also planned to give consideration to the preference of the registrants to the branch of service which they would ultimately enter.

The administration of the corps was carried on by the War Department through its Committee on Education and Special Training of the Training and Instruction Branch, War Plans Division, General Staff, assisted by the Advisory Educational Board, together with educational directors, district educational directors, and special advisers. The War Department provided an officer of the Army at each college to serve as commanding officer, and the commanding officer and other officers assigned to duty with different units were directed to observe the general usages of the various institutions affecting the duties and obligations of the members of the faculty or other academic instructors. They were not permitted to undertake any instructional or administrative duties in the institution other than those connected with the military work of the corps. The military officers were assigned to the duty of enforcing military discipline, but no authority was given them to direct or interfere with purely educational matters.

The original plan of training consisted of 11 hours of military studies, including drill, theoretical and military instruction, and physical training, and 42 hours per week for allied subjects. These 42 hours included lectures, recitations, laboratory instruction, and necessary preparation therefor. After two terms of work the arrangement provided for 6 hours of military training and 47 hours of study of the allied subjects. It will be seen later that suggested courses for technical schools were submitted by the committee from which the actual courses given at an institution were planned and submitted for approval to the regional director.

The Committee on Education and Special Training issued from time to time circulars regarding the treatment of the various subjects in accordance with the aims of the War Department.

The allied subjects mentioned above included the following: English, French, German, mathematics, physics, chemistry, biology, psychology, geology, geography, topography and map drawing, meteorology, astronomy, hygiene, sanitation, descriptive geometry, mechanical and free-hand drawing, surveying, economics, accounting, history, international law, military law and government. In the case of the technical and professional schools, provisions were made for approving a general program containing subjects other than those included in the above list, and also permission could be granted any institution for the recognition as an allied subject one subject outside the foregoing list provided it occupied not more than three hours per week in lectures and recitations combined.

A special course in war issues was demanded in all programs of study for section A. This was to cover three classroom hours per week for two terms. This course was intended to give students a clear understanding of the causes of the war and the various steps previous to the beginning of hostilities.

In section B the required hours were as follows: Military subjects, including drill and physical training, 15½ hours; vocational subjects, 33 hours; war issues, 1 hour.

The general scheme for work in section A covered a period of eight terms of 12 weeks each, with a vacation period of one week at the end of each term. In this way the academic or technical work would be done in a period of two years, and it was hoped that the men thus trained would be prepared for technical work or for officer material.

The proposed schedules of studies for the four engineering courses as proposed by the Committee on Educational and Special Training are given herewith:

CIVIL ENGINEERING

FIRST TERM		FOURTH TERM	
	Hours per week		Hours per week
Mathematics.....	12	Mathematics.....	9
Chemistry.....	12	Physics.....	14
Drawing and descriptive geometry or surveying.....	9	Mechanics.....	15
War issues and English composition.....	9	Surveying or drawing.....	9
Military training.....	11	Military training.....	6
Total.....	53	Total.....	53
SECOND TERM		FIFTH TERM	
Mathematics.....	12	Theory of structures.....	6
Chemistry.....	12	Materials.....	10
Drawing and descriptive geometry or surveying.....	9	Railroad engineering (including drafting and field work).....	15
War issues and English composition.....	9	Highway engineering.....	6
Military training.....	11	Map reading and topographical drawing.....	2
Total.....	53	Geology.....	8
		Military training.....	6
		Total.....	53
THIRD TERM		SIXTH TERM	
Mathematics.....	12	Theory of structures.....	9
Physics.....	14	Bridge design.....	4
Mechanics and mechanism.....	15	Railroad engineering (including drafting).....	9
Drawing and descriptive geometry or surveying.....	6	Hydraulics.....	14
Military training.....	6	Electrical engineering.....	12
Total.....	53	Military training.....	6
		Total.....	53

SEVENTH TERM.	Hours per week.	EIGHTH TERM	Hours per week.
Theory of structures.....	12	Theory of structures.....	12
Bridge design.....	10	Hydraulic and sanitary engineering and design.....	16
Railroad engineering.....	4	Heat engineering.....	9
Heat engineering.....	12	Railroad design.....	3
Hydraulic and sanitary engineering.....	9	Sanitary science and public health.....	1
Military training.....	6	Business law and accounting.....	6
Total.....	53	Military training.....	6
		Total.....	53

Courses divided between surveying and drawing were to be given in accordance with the season of year in which they came and the number registered. The total time allotment to surveying was to be equivalent to 12 hours per week for one term.

MECHANICAL ENGINEERING.

FIRST TERM.	Hours per week.	FIFTH TERM—continued	Hours per week.
Mathematics.....	12	Applied mechanics.....	12
Drawing and descriptive geometry.....	9	Machine drawing.....	6
Chemistry.....	12	Shopwork.....	4
War issues and English composition.....	9	Military training.....	6
Military training.....	11	Total.....	53
Total.....	53		
SECOND TERM.		SIXTH TERM.	
Mechanism.....	9	Heat engineering and engineering laboratory.....	15
Mathematics.....	12	Hydraulics.....	11
Chemistry.....	12	Applied mechanics.....	10
War issues and English composition.....	9	Electrical engineering laboratory.....	7
Military training.....	11	Shopwork.....	4
Total.....	53	Military training.....	6
		Total.....	53
THIRD TERM.		SEVENTH TERM.	
Mechanism and mechanical engineering drawing.....	10	Materials of engineering and testing materials laboratory.....	12
Mathematics.....	12	Mechanics of machines.....	5
Physics.....	14	Machine design.....	10
Shopwork.....	4	Applied mechanics.....	10
Surveying, map reading, and topographical drawing.....	7	Surveying or refrigeration.....	2
Military training.....	6	Shopwork.....	4
Total.....	53	Engineering laboratory.....	4
		Military training.....	6
		Total.....	53
FOURTH TERM.		EIGHTH TERM.	
Applied mechanics.....	12	Power plant design.....	5
Mathematics.....	12	Industrial plants (including heating and ventilation).....	16
Mechanical engineering drawing.....	5	Mechanics of engineering.....	7
Physics and physical laboratory.....	14	Engineering laboratory.....	10
Shopwork.....	4	Gas motors.....	5
Military training.....	6	Shopwork.....	4
Total.....	53	Military training.....	6
		Total.....	53
FIFTH TERM.			
Heat engineering and engineering laboratory.....	15		
Electrical engineering.....	10		

In place of gas motors, 60 hours (total) of laboratory and lecture work may be assigned to heat treatment.

ELECTRICAL ENGINEERING.

FIRST TERM.	Hours per week.	THIRD TERM.	Hours per week.
Mathematics.....	12	Mathematics.....	12
Drawing and descriptive geometry.....	9	Physics.....	14
Chemistry.....	12	Mechanics and applied mechanics.....	12
War issues and English composition.....	9	Mechanical engineering drawing.....	9
Military training.....	11	Military training.....	6
Total.....	53	Total.....	53
SECOND TERM.		FOURTH TERM.	
Mathematics.....	12	Mathematics.....	12
Chemistry.....	12	Physics.....	14
Drawing and descriptive geometry.....	9	Elements of electrical engineering.....	2
War issues and English composition.....	9	Applied mechanics.....	12
Military training.....	11	Surveying, map reading, and topographical drawing.....	7
Total.....	53	Military training.....	6
		Total.....	53

FIFTH TERM.	Hours per week.	SEVENTH TERM.	Hours per week.
Elements of electrical engineering and direct-current machinery.....	15	Alternating current machinery.....	15
Electrical engineering laboratory.....	8	Electrical engineering laboratory.....	8
Heat engineering.....	9	Hydraulics.....	9
Materials of engineering.....	6	Electrical transmission (power and telephone).....	15
Shopwork.....	9	Military training.....	6
Military training.....	6	Total.....	53
Total.....	53		
SIXTH TERM.		EIGHTH TERM.	
Variable and alternating currents.....	12	Alternating current machinery.....	8
Electrical engineering laboratory.....	12	Electrical engineering laboratory.....	6
Heat engineering.....	9	Power stations (steam and hydraulic).....	13
Mechanical engineering laboratory.....	8	Motor applications, lighting and storage batteries.....	16
Structures of machine design.....	6	Business law and accounting.....	4
Military training.....	6	Military training.....	6
Total.....	53	Total.....	53

CHEMICAL ENGINEERING.

FIRST TERM.	Hours per week.	FIFTH TERM.	Hours per week.
Inorganic chemistry.....	21	Quantitative analysis.....	15
Mathematics.....	12	Physical chemistry.....	17
War issues and English composition.....	9	Theoretical and applied mechanics.....	15
Military training.....	11	Military training.....	6
Total.....	53	Total.....	53
SECOND TERM.		SIXTH TERM.	
Inorganic chemistry and qualitative analysis.....	21	Physical chemistry.....	17
Mathematics.....	12	Organic chemistry.....	18
War issues and English composition.....	9	Elements of electrical engineering.....	12
Military training.....	11	Military training.....	6
Total.....	53	Total.....	53
THIRD TERM.		SEVENTH TERM.	
Qualitative analysis.....	12	Organic chemistry.....	16
Quantitative analysis.....	2	Chemical technology.....	8
Mathematics.....	12	Proximate technical analysis.....	8
Physics.....	14	Elements of thermodynamics and heat engineering.....	15
General engineering drawing.....	7	Military training.....	6
Military training.....	6	Total.....	53
Total.....	53		
FOURTH TERM.		EIGHTH TERM.	
Quantitative analysis.....	14	Chemical technology.....	24
Elements of organic chemistry.....	6	Chemical warfare.....	1
Physics.....	12	Engineering materials.....	12
Theoretical and applied mechanics.....	7	Mechanical engineering laboratory.....	10
General engineering drawing.....	8	Military training.....	6
Military training.....	6	Total.....	53
Total.....	53		

To show how closely the schedule suggested by the committee on Education and Special Training was carried out in one instance, the schedules given below were submitted by the Rensselaer Polytechnic Institute and approved by the regional director, President Charles Alexander Richmond, of Union College, Schenectady, N. Y.

The numbers given after courses represent clock hours in the following order: Recitation, preparation, lecture, laboratory, followed total number of hours.

RENSSELAER POLYTECHNIC INSTITUTE.

CIVIL ENGINEERING.

FIRST TERM.		FIFTH TERM--continued.	
	Hours per week.		Hours per week.
Algebra 4-8-0-0.....	12	Highways 2-4-0-0.....	6
Chemistry 2-4-2-4.....	12	Map reading and top. drawing 0-0-0-2.....	2
Drawing 1-2-0-6.....	9	Geology 2-4-2-0.....	8
War issues 3-6-0-0.....	9	Military training.....	6
Military training.....	11	Total.....	53
Total.....	53		
SECOND TERM.		SIXTH TERM.	
	Hours per week.		Hours per week.
Trigonometry and analytics 4-8-0-0.....	12	Structures and bridge design 4-8-1-0.....	13
Chemistry 0-0-0-12.....	12	Railroad engineering 2-4-0-0.....	6
Descriptive geometry 2-4-0-3.....	9	Geodesy 1-2-0-1.....	4
War issues 3-6-0-0.....	9	Hydraulics 4-8-0-0.....	12
Military training.....	11	Electrical engineering 2-4-2-4.....	12
Total.....	53	Military training.....	6
		Total.....	53
THIRD TERM.		SEVENTH TERM.	
	Hours per week.		Hours per week.
Analytics and calculus 4-8-0-0.....	12	Bridge design 4-8-0-0.....	12
Physics 2-4-4-4.....	14	Reinforced concrete 3-6-1-0.....	10
Mechanism 3-6-0-0.....	9	Steam engines 3-6-0-0.....	9
Surveying 1-2-0-3.....	6	Power plants 0-0-0-3.....	3
Descriptive geometry 1-2-0-3.....	6	Business law and accounting 1-2-1-0.....	4
Military training.....	6	Hydraulic and sanitary engineering 3-6-0-0.....	9
Total.....	53	Military training.....	6
		Total.....	53
FOURTH TERM.		EIGHTH TERM.	
	Hours per week.		Hours per week.
Calculus 4-8-0-0.....	12	Bridge design 0-0-0-12.....	12
Physics 2-4-4-4.....	14	Hydraulic and sanitary engineering design 2-4-0-4.....	10
Mechanics 2-4-0-0.....	6	Thermodynamics 2-4-0-0.....	6
Railroad engineering 2-4-0-0.....	6	Mechanical laboratory 0-0-0-2.....	2
Surveying 1-2-0-6.....	9	Railroad engineering 0-0-0-9.....	9
Military training.....	6	Machine design 0-0-0-2.....	2
Total.....	53	Sanitary science and public health 1-2-1-0.....	4
		Astronomy 0-0-0-2.....	2
FIFTH TERM.		Military training.....	6
	Hours per week.	Total.....	53
Theoretical mechanics 2-4-0-0.....	6		
Applied mechanics 4-8-0-0.....	12		
Materials laboratory 0-0-0-4.....	4		
Railroad engineering 0-0-0-9.....	9		

MECHANICAL ENGINEERING.

FIRST TERM.		THIRD TERM.	
	Hours per week.		Hours per week.
Algebra 4-8-0-0.....	12	Analytics and calculus 4-8-0-0.....	14
Chemistry 2-4-2-4.....	12	Physics 2-4-4-4.....	12
Drawing 1-2-0-6.....	9	Mechanism 3-6-0-0.....	9
War issues 3-6-0-0.....	9	Chemistry 0-0-0-12.....	12
Military training.....	11	Military training.....	6
Total.....	53	Total.....	53
SECOND TERM.		FOURTH TERM.	
	Hours per week.		Hours per week.
Trigonometry and analytics 4-8-0-0.....	12	Calculus 4-8-0-0.....	12
Steam engineering 3-6-0-0.....	9	Physics 2-4-4-4.....	14
Mechanism 1-2-0-0.....	3	Mechanics 2-4-0-0.....	6
Descriptive geometry 2-4-0-3.....	9	Surveying 1-2-0-4.....	7
War issues 3-6-0-0.....	9	Shop 0-0-0-8.....	8
Military training.....	11	Military training.....	6
Total.....	53	Total.....	53

¹ The numbers given after the courses represent the clock hours in the following order: Recitation, preparation, lecture, laboratory, followed by total number of hours.

FIFTH TERM.	Hours per week.
Theoretical mechanics 2-4-0-0.....	6
Applied mechanics 4-8-0-0.....	12
Thermodynamics 3-6-0-0.....	9
Electrical engineering 3-6-1-0.....	10
Boilers 2-4-1-0-0.....	6
Shop 0-0-0-4.....	4
Military training.....	6
Total.....	53

SIXTH TERM.	Hours per week.
Structures 3-6-0-0.....	9
Hydraulics 4-8-0-0.....	12
Heat engines 3-6-0-0.....	9
Naval architecture 0-0-0-2.....	2
Mechanical laboratory 0-0-0-4.....	4
Electrical laboratory 0-0-0-7.....	7
Shop 0-0-0-4.....	4
Military training.....	6
Total.....	53

SEVENTH TERM.	Hours per week.
Metallurgy 3-6-0-0.....	9
Materials laboratory 0-0-0-3.....	3

SEVENTH TERM—continued	Hours per week.
Graphics of machinery 4-2-0-2.....	5
Machine design 2-4-0-4.....	10
Steam engine design 3-6-0-0.....	9
Refrigeration 1-2-0-0.....	3
Business law and accounting 1-2-1-0.....	4
Mechanical laboratory 0-0-0-4.....	4
Military training.....	6
Total.....	53

EIGHTH TERM.	Hours per week.
Power plants 1-2-0-2.....	5
Industrial plants 3-6-0-0.....	9
Marine engineering 1-2-0-0.....	3
Heating and ventilation 2-4-0-0.....	6
Automobile design 0-0-0-1.....	4
Gas engine 2-4-0-0.....	6
Hydraulic turbines 1-2-0-0.....	3
Shop 0-0-0-8.....	8
Mechanical laboratory 0-0-0-4.....	4
Military training.....	6
Total.....	53

ELECTRICAL ENGINEERING¹

FIRST TERM.	Hours per week.
Algebra 4-8-0-0.....	12
Chemistry 2-4-2-4.....	12
Drawing 1-2-0-6.....	9
War issues 3-6-0-0.....	9
Military training.....	11
Total.....	53

SECOND TERM.	Hours per week.
Trigonometry and analytics 4-8-0-0.....	12
Steam engineering 3-6-0-0.....	9
Mechanism 1-2-0-0.....	3
Descriptive geometry 2-4-0-3.....	9
War issues 3-6-0-0.....	9
Military training.....	11
Total.....	53

THIRD TERM.	Hours per week.
Analytics and calculus 4-8-0-0.....	12
Physics 2-4-4-4.....	14
Mechanism 3-6-0-0.....	9
Chemistry 0-0-0-12.....	12
Military training.....	6
Total.....	53

FOURTH TERM.	Hours per week.
Calculus 4-8-0-0.....	12
Physics 2-4-4-4.....	14
Elements of electrical engineering 0-0-2-0.....	2
Mechanics 2-4-0-0.....	6
Shop 0-0-0-6.....	6
Surveying 1-2-0-4.....	7
Military training.....	6
Total.....	53

FIFTH TERM.	Hours per week.
Theoretical mechanics 2-4-0-0.....	6
Applied mechanics 4-8-0-0.....	12
Elements of electrical engineering and direct current machinery 3-4-0-0.....	15
Electrical engineering laboratory 0-0-0-8.....	8
Thermodynamics 2-4-0-0.....	6
Military training.....	6
Total.....	53

SIXTH TERM.	Hours per week.
Variable and alternating current 4-8-0-0.....	12
Electrical engineering laboratory 0-0-0-12.....	12
Hydraulics 4-8-0-0.....	12
Mechanical laboratory 0-0-0-5.....	5
Machine design 1-2-0-3.....	6
Military training.....	6
Total.....	53

SEVENTH TERM.	Hours per week.
Alternating current machinery 2-6-4-3.....	15
Electrical engineering 0-0-0-8.....	8
Electrical transmission 3-6-0-0.....	15
Business law and accounting 1-2-1-0.....	4
Boilers 1-2-0-2.....	5
Military training.....	6
Total.....	53

EIGHTH TERM.	Hours per week.
Alternating current machinery 2-4-2-0.....	8
Electrical engineering laboratory 0-0-0-6.....	6
Power plants, mechanical 1-2-0-2.....	5
Power plants, electrical 1-2-0-2.....	5
Hydraulic turbines 1-2-0-0.....	3
Motor application, lighting and storage batteries 3-6-3-3.....	15
Heat engines 1-2-0-2.....	5
Military training.....	6
Total.....	53

¹ The numbers given after the courses represent the clock hours in the following order: Recitation, preparation, lecture, laboratory, total.

CHEMICAL ENGINEERING.

FIRST TERM.	Hours per week.	FIFTH TERM—continued.	Hours per week.
Algebra 4-8-0-0.....	12	Chemistry, organic 3-6-0-10.....	19
Chemistry 2-4-2-4.....	12	Military training.....	6
Drawing 1-2-0-6.....	9	Total.....	53
War issues 3-6-0-0.....	9		
Military training.....	11		
Total.....	53		
		SIXTH TERM.	
SECOND TERM.		Structures 1-2-0-0.....	3
Trigonometry and analytics 4-8-0-0.....	12	Electrical engineering laboratory 0-0-0-7.....	7
Chemistry 2-4-0-0.....	6	Hydraulics 4-8-0-0.....	12
Chemistry 0-0-0-12.....	12	Machine design 1-2-0-3.....	6
Mechanical drawing 0-0-0-3.....	3	Physical chemistry 3-6-0-8.....	17
War issues 3-6-0-0.....	9	Gas analysis 0-0-0-2.....	2
Military training.....	11	Military training.....	6
Total.....	53	Total.....	53
		SEVENTH TERM.	
THIRD TERM.		Metallurgy 3-6-0-0.....	9
Analytics and calculus 4-8-0-0.....	12	Business law and accounting 1-2-1-0.....	4
Physics 2-4-1-1.....	14	Materials laboratory 0-0-0-3.....	3
Chemistry, quantitative 3-6-0-0.....	9	Steam engines 2-4-0-0.....	6
Chemistry, qualitative 0-0-0-12.....	12	Water analysis 0-0-0-10.....	10
Military training.....	6	Electro-chemistry 1-2-1-4.....	8
Total.....	53	Physical chemistry 1-2-0-0.....	3
		Mechanical laboratory 0-0-0-4.....	4
FOURTH TERM.		Military training.....	6
Calculus 4-8-0-0.....	12	Total.....	53
Physics 2-4-1-1.....	14		
Chemistry 2-4-0-0.....	15	EIGHTH TERM.	
Mechanics 2-4-0-0.....	6	Sewage 1-2-1-0.....	4
Military training.....	6	Power plants 1-2-0-2.....	5
Total.....	53	Thermodynamics 2-4-0-0.....	6
		Surveying and topography 1-2-0-1.....	7
FIFTH TERM.		Mechanism 2-4-0-0.....	6
Theoretical mechanics 2-4-0-0.....	6	Food analysis 1-2-0-4.....	7
Applied mechanics 4-8-0-0.....	12	Industrial chemistry 2-4-0-2.....	8
Electrical engineering 2-6-2-0.....	10	Sanitary science and public health 1-2-1-0.....	4
		Military training.....	6
		Total.....	53

To care for men who had been at the Rensselaer Polytechnic Institute for one or two years, the following schedules were arranged.

Work was to be done as of third term for men who had been at the institute one year of two terms and who were taking the third term at this time. Numbers after courses have the same meaning as given on complete schedules, viz, clock hours devoted to recitations preparation, lecture, laboratory, followed by total.

CIVIL ENGINEERS.	Hours per week.	MECHANICAL AND ELECTRICAL ENGINEERS.	Hours per week.
Calculus 4-8-0-0.....	12	Calculus 4-8-0-0.....	12
Physics 2-4-2-2.....	10	Physics 2-4-0-2.....	8
Mechanism 3-10-0-0.....	15	Mechanism 3-10-0-0.....	15
Highways 2-4-0-0.....	6	Chemical laboratory 0-0-0-9.....	9
Surveying 1-2-0-1.....	4	Topographical drawing 2-0-0-3.....	3
Military training.....	6	Military training.....	6
Total.....	53	Total.....	53
		CHEMICAL ENGINEERS.	Hours per week.
		Calculus 4-8-0-0.....	12
		Physics 2-4-0-2.....	8
		Chemistry 3-6-0-12.....	21
		Mechanics 2-4-0-0.....	6
		Military training.....	6
		Total.....	53

¹ The numbers given after the courses represent the clock hours in the following order: Recitation, preparation, lecture, laboratory, followed by total.

² Shop taken in past summer.

War issues for this class were to be given in the fifth and sixth terms.

The work to be done was considered as of the fifth term for men who had been at the institute for two years, or four terms, and who were taking the fifth term at this time.

CIVIL ENGINEERS.	Hours per week.	ELECTRICAL ENGINEERS.	Hours per week.
Physics 2-4-0-1.....	16	Elements of electrical engineering and direct current 5-10-0-0.....	15
Mechanics 5-10-0-0.....	15	Electrical engineering laboratory 0-0-0-8.....	8
Highways 1-2-1-0.....	4	Thermodynamics 3-6-0-0.....	9
Topographical drawing 0-0-0-1.....	1	Mechanics 5-10-0-0.....	15
Mineralogy and geology 2-4-2-0.....	8	Military training.....	6
Railroad engineering 3-6-0-0.....	9	Total.....	53
Military training.....	6		
Total.....	53		
MECHANICAL ENGINEERING.		CHEMICAL ENGINEERS.	
Thermodynamics 3-6-0-0.....	9	Mechanics 5-10-0-0.....	15
Boilers 2-4-0-1.....	7	Electrical engineering 3-6-10-0.....	10
Electrical engineering 3-6-10-0.....	10	Chemistry, organic 3-6-0-10.....	19
Mechanics 5-10-0-0.....	15	Electrical engineering laboratory 0-0-0-3.....	3
Mechanical laboratory 0-0-0-6.....	6	Military training.....	6
Military training.....	6	Total.....	53
Total.....	53		

The work done by men who had been at the institute for three and one-half years, since the first term of the senior year had been given during the spring and summer of 1918 and were therefore taking the eighth term at the institute, was arranged to complete the regular institute course during the term which ended January 9, 1919, at which time a proposed commencement would take place. The work during the summer included the subjects of the regular course to such an extent that the number of hours per week required for students on the Students' Army Training Corps basis ran from 27½ to 47½ hours per week. This included study periods. The courses given were the theoretical subjects of the senior year of the institute curriculum.

The committee schedules were issued in many cases after the regular time of opening for the technical institutions, and from the middle of September to the 1st of October students were being inducted into the corps.

On October 1, 1918, the United States Army training detachments which were established at educational institutions by the Committee on Education and Special Training were merged with the Students' Army Training Corps, as this date was set for the formal mobilization of this corps. At this time, at more than 400 colleges and universities throughout the United States, over 150,000 young men became members of the Army or Navy of the United States.

On September 17, 1918, orders were issued to the mobilization officers at various recruiting stations permitting students subject to draft to enroll as members of the naval section of the Students' Army Training Corps at institutions at which naval units were established. At various institutions throughout the country a limited number of men were allowed to enter the naval units.

Following the signing of the armistice, orders were issued to demobilize the Students' Army Training Corps, and this began about the first of December, demobilization being completed about December 21.

This experiment covered a period of 12 weeks and completed the first term of the Students' Army Training Corps. It was necessary for each school to keep records of the scholastic work of the students on the percentage basis of 100. The committee requested monthly records of grades to be sent to them for the purpose of furnishing necessary information regarding various members of the corps. The military records were kept by the personnel officer. The work of each term of 12 weeks was to have been followed by a furlough of one week, and from the records made by members of the corps their continuation was to have been determined.

The work of the Students' Army Training Corps was in general far from satisfactory to the college administrators, largely because the relations between the military commanders and the educational authorities were not fully adjusted. The demand for men to be used for military duty and for kitchen police prevented many students from properly pursuing their studies, and in many cases the time taken for drill and guard duty prevented students from obtaining proper educational training. The period covered by this experience, however, was the period of an entirely new experiment, and the unforeseen difficulties had not been overcome by the time the experiment was concluded. It was the belief of many that, had the Students' Army Training Corps been continued for a longer period, these difficulties could have been rectified and the training made successful.

From a study of the courses listed above, it will be evident that with proper administration the four courses in engineering would have given training sufficient to produce able engineers, considering that this training was planned for intensive study during a critical period of the life of the Nation.

LATER DEVELOPMENTS IN ENGINEERING EDUCATION.

The period covered by the years 1919 and 1920 is marked by few changes in the curricula of the engineering schools; some of these changes have been in progress for five or six years, some have been brought about by new demands, and some by new laws. Very few schools report changes due to war experiences or to the Mann report, mentioned in the Biennial Survey of Education, 1916-1918, U. S. Bureau of Education, Vol. I, page 100.

The war experiences of the schools of engineering are so recent, and in many cases were so unsatisfactory, that it is difficult to obtain any constructive suggestions from these experiences. Of the replies received from those in charge of engineering schools, only one states

that the war experience gave suggestive matter. This suggestion was the value of supervised study. The author of this reply believes that great value can be derived and should be accomplished by supervised study. To the writer of this report the plan of supervised study was welcomed as a method of increasing the study time of the students, but when this was instituted it was found that with those unaccustomed to study in large rooms with a number of persons present the method produced poor results. The psychological effect of restricted activity and uniform study time of definite duration was bad. The results of this method were not good, and there was much complaint from the students.

The methods used for the Students' Army Training Corps were revolutionary in that old values were absolutely abandoned for the time being, and many thought that the engineering curricula might be changed at the conclusion of the war. This did not occur, for the unhappy experiences of the Students' Army Training Corps days made all anxious to return to pre-war conditions. This experience was unfortunate in that it was of such short duration that there was nothing in the three months of operation to correct the evils which had developed, and, as said before, many believe that, had the Students' Army Training Corps been continued for a year with war incentives for work, a different result could have been expected.

The experiment did prove the value of an incentive for work, an impelling motive, and in this post-war period courses for orientation of the young engineer have been introduced, and "motivation" is a new term, which indicates the influence of such courses on the work of the engineering student. The war experience has also shown to many that courses of study may be changed without great difficulty, and it may be with advantage.

The various replies that have been received regarding the effect of the Mann report have indicated in most cases that the report has had little influence. A few have used the reports as a basis for changes in the curriculum, and others have made changes which are recommended in the report, but the consideration of these antedated the report, and were due to the developments of educational methods or the demands of the times. Many of these changes have been advocated and discussed at the meetings of the Society for the Promotion of Engineering Education. In many institutions the report has received careful study by faculty and officers.

To help the Nation at the critical period of the war, many institutions graduated the classes in engineering at an early day by utilizing Saturdays for class work, and in this way men were graduated in February and May, 1918, in place of June, 1918.

In some institutions, before the establishment of or plans for the Students' Army Training Corps were made, instruction was given -

during the summer of 1918, and thus they were enabled to graduate the class of 1919 in December, 1918. The armistice of November, 1918, made any further speeding up of work unnecessary; and after the graduation in December, 1918, or January, 1919, and the demobilization of the Students' Army Training Corps, work was resumed on almost normal schedules. The changes brought about by the Students' Army Training Corps work of the first term made the studies in January of such a nature that the regular schedule could be resumed at the beginning of the second term in February, 1919.

The period 1918-1920 marks a new era of increased enrollment in the engineering schools. The enrollment of September, 1918, in the Students' Army Training Corps, was large. This was due to many causes. In the first place the Government agreed to send eligible young men to college and to pay their expenses, including tuition, board, room rent, and clothing, as well as to give them the pay of regular soldiers. Besides this, the Selective Draft Law made it impossible for one of draft age to get an education in any other manner, and many men wanted to serve their country in this way. It is possible, too, that some who were eligible took advantage of the Students' Army Training Corps to avoid active fighting service.

On the demobilization of the Students' Army Training Corps a number of men left, but after the demobilization of the Army many other men returned for the second term in the spring of 1919, so that the second term enrollment amounted to 75 per cent of the enrollment of the first term.

In the fall of 1919 the enrollment of most engineering schools was even larger than that during the Students' Army Training Corps period, and this large enrollment was continued or exceeded in the fall of 1920, and that of 1920 by the still larger enrollment of 1921.

The large enrollments during these years have been due to the return of many who had interrupted their studies early in the war to unite with arms of our own service or those of our allies; to the return of those who were drafted; to the fact that the war interrupted the education of many who would have entered the engineering schools during the period of the war, and finally to the fact that many students or parents had been placed in such a financial condition, because of the high wages paid to artisans, that certain young men were able to pay the cost of higher education. In addition, the value of college education was demonstrated by the success of the college trained men during the war in the service and the industries.

The showing made by men trained in engineering during this critical period indicated to many the value of such education, and it is believed that this large enrollment will be maintained unless business depression continues for a long time. The demand for men trained in engineering for executive positions in the industries also indicates that this enrollment will continue.

There are several tendencies of this period which are indicated by a study of the college catalogues and of the replies to inquiries. These tendencies, although more evident at this time, have been gradually developing, and in some cases they have been evident for years.

There is some indication that more special courses are desired, such as compressed-air engineering, industrial engineering, heating and ventilating engineering; but there is a strong current of feeling that we should develop men fundamentally and broadly and leave the specialties to be acquired after graduation. Thus at the State University of Iowa the course of the first three years in engineering is common to all engineers, and only two-thirds of the work of the various branches of engineering in the senior year is different. Others report two years in common, and many report one year in common.

There is a tendency to introduce engineering courses of a general nature in the freshman year for the purpose of orientation, although this has been the avowed practice of many for years. A number of institutions have introduced these courses, and in some cases the course takes the form of a series of lectures by heads of the various engineering departments given to all students, while in others special courses are given in each of the departments of engineering. These institutions feel the necessity of giving the student a motive for work by arousing interest in the activities of the engineer, the study of which must of necessity come after the preparatory years in fundamental subjects.

In many engineering schools the subjects of citizenship, economics, sociology, bookkeeping, shop management, business administration, finance, and law are being added to the curriculum by the exclusion of certain engineering subjects. The engineer is now playing more of a part in administration and the management of plants. For this reason these courses are required. The courses omitted are those of a special nature, which may therefore be properly taken up by the graduate in connection with his technical work. The sciences dealing with the fundamentals of human relationships are as necessary as the fundamentals of engineering in the world in which the engineer must work to-day.

In addition to adding these subjects in a greater or lesser degree, some institutions have offered courses in administrative engineering, as at Sheffield Scientific School of Yale University; in administrative science, as at the University of Kansas; and in an administrative option, differing in the last two years from a technical option, as at Union College in civil engineering; and others have offered courses in commercial mechanical engineering or commercial electrical engineering, as at the State College of Washington.

The courses in industrial engineering established at certain engineering schools are being continued, while at Columbia and at the

University of New Hampshire industrial engineering has just been established. At some institutions special intensive summer courses in the industries are given to engineers who are engaged in industrial engineering.

Certain schools of engineering, such as that of the University of Pennsylvania, are giving special spring courses in highway engineering to train graduate engineers in road building and economics. The great wave of service by the engineer is entering our schools in their desire to render service to the graduate needing further training after entering practice.

The success obtained from certain problem courses during the intensive Army training period, and the belief of some educators even before the war, have united to cause the introduction of courses in engineering by which the teaching is done through problems. At Lafayette College freshmen during their first term are given problems connecting mathematics and engineering. At other institutions this kind of work is applied to the subjects of the later years, and as a result of five years of investigation the engineering school of Tufts College has made a departure from the usual curricula of engineering schools, the aim of which is:

- (1) To present a survey or perspective of a chosen field of engineering previous to a detailed study of fundamentals.
- (2) To coordinate theory and practice by using projects of a distinctively engineering character involving theory.
- (3) To reduce the number of subjects studied at one time, while intensifying the work in these subjects.
- (4) To rate the student by observation on his character as well as by the quality and quantity of the prescribed task.

To accomplish these ends, there is given in the freshman year the so-called main introductory course in connection with mathematics, English, and drawing. The main course consists in the study of four projects for the civil engineers and four projects in common for the mechanical engineers and electrical engineers.

During the first year of this new method the projects for the civil engineers were:

- First. The study of a wooden garage.
- Second. The study of a steel garage.
- Third. The study of a small highway bridge.
- Fourth. The layout and survey of an underground tunnel.

The projects for the mechanical and electrical engineers were:

- First. The measurement of power developed and delivered by a steam engine.
- Second. The dismantling, reassembling, and operation of various types of automobiles.
- Third. The distribution of potential along lighting circuits.
- Fourth. The study of the operation of batteries.

The projects use three laboratory periods and three recitation periods a week for the whole freshman year, and in this time laboratory work, drawing, surveying, graphics, handbooks, sketching, elementary

mechanics, kinematics, steam engineering, and electrical instruments were used as needed, and where possible the work was coordinated with textbook assignments.

This introductory course increased the interest shown by the student and made him more observant. It reacted on the student in helping him in the English work of the freshman year in giving him material on which he could write.

In the upper class the endeavor is to cut down the number of required subjects to five. This was done by combining certain related courses into one course. The outline of the course for each term in each year is given below:

FIRST YEAR.		Hours per week.	THIRD YEAR.		Hours per week.
Main introductory course.....		12	Departmental courses.....		18
Mathematics.....		9	Applied mechanics.....		6
Graphics.....		7	Physics.....		6
English.....		6	Elective.....		6
Total.....		34	Total.....		36
SECOND YEAR.			FOURTH YEAR.		
Department courses.....		12	Engineering economies and business.....		6
Two supplemental courses.....		11	Departmental courses and elective.....		30
Mathematics and mechanics.....		6			—
Electives.....		4	Total.....		36
Total.....		33			

In the application of the problem method some institutions feel that their lack of success has been due to the lack of maturity of the students. There can be little doubt that the problem method may excite interest and aid in the later theoretical study, but it may also be said that previous theoretical study will lead to greater facility in the solution of problems.

In languages there is a tendency to extend the work in English and reduce or eliminate foreign languages. Training in public speaking and debate are required by some. The lack in English is felt for the same reason that we feel the lack of training in the subjects dealing with human relations. As the engineer has to deal with men to a greater degree, he must know how to transmit his thoughts in words as well as by drawings.

There is a slight indication that more physical exercise is to be demanded in our schools. This probably is an indirect result of war experience, when it was found that so many of our men were not physically fitted for effective service.

During the last 5 or 10 years there has been a tendency to divide the year so as to form quarterly periods, using the summer quarter for the removal of conditions and for the graduate or undergraduate work of public school teachers. This meant that the regular courses were given in three quarters. The reports from some institutions indicate that a return will be made to the customary two-semester plan, although at the Southern California Institute of Technology the two-semester work has been changed to three terms.

The design courses, which are an important part of some curricula, have been dropped from the curriculum of the University of Oklahoma.

One of the recent changes in engineering education has been the extension of the school of engineering at Princeton University in 1921 to include undergraduate courses in civil engineering, electrical engineering, mechanical engineering, chemical engineering, and mining engineering, as well as a graduate year for the first four of these courses.

The plan has been under consideration for a number of years, and the desire has been to utilize the facilities of the university for the general education of engineers with broad vision and to give the necessary technical work to prepare the graduate for the profession. The aim has been to limit the technical work to the fundamentals of engineering, covering sufficient preparation to make the graduate of the four-year course able to enter engineering as an assistant, leaving to a graduate year the many special courses now included in the four-year engineering courses.

The preliminary schedule of studies for these courses shows the following average figures:

	Per cent.
Science.....	23
Mathematics.....	11
English and foreign language.....	15
Sociology, economics, history, and electives.....	18
Engineering.....	33
Total.....	100

The graduate year leading to an engineering degree is to consist of engineering, economics, and research. The four-year course will lead to a bachelor's degree.

The cooperative system of engineering education used for a number of years at various institutions has been introduced into the electrical engineering department of the Massachusetts Institute of Technology. In this newest cooperative plan of study the aim has been to give all practical training in one manufacturing institution, the General Electric Co., at Lynn, Mass.

The first two years of the course are similar to the first two years of the regular four-year course, and then during the summer of the second year the entire cooperative class is sent to the General Electric Co., at Lynn, Mass., to begin their practical training. At the end of this summer period of 13 weeks the class is divided into halves, and one half continues at the works for 13 weeks while the other half returns to the institute for 11 weeks of instruction to be followed by a 2 weeks' vacation to complete the 13 weeks' period. The halves now change places, one section returning to the institute for its 11 weeks of instruction and 2 weeks of vacation and the other going to the shops for 13 weeks of practical work. This is continued until the expira-

tion of two and one-half years, the student having had work in the factory for 18 months and 5 terms of 11 weeks' actual instruction at the institute. The whole class spends the last period at the institute. Interpreting this into standard college years of about 33 weeks, the student has completed four college years at the institute and one and one-half actual years in practical work and some theory at the shop. At the end of this period the successful student receives the degree of B. S. as of the previous year and the degree of M. S.

The work in the shop is so arranged that the student works 48 hours per week in shop or office, 4 hours in lectures or recitations, and 6 hours in study and preparation. Of the 4 hours mentioned, 1 hour is devoted to a lecture by one of the shop superintendents and 3 hours are given to recitations in electricity and English. This requires 58 hours per week and gives the student three week-day evenings, Saturday afternoon, and all of Sunday as free time, and permits him to do all required work by 9.30 on the other three evenings.

The period of 11 weeks at the institute is such that the institute courses can be given without any disarrangement of other work, as the periods correspond with institute terms. The theoretic studies include advanced subjects, and in the last year are included research and creative design at the institute and experience in the research laboratories and in the engineering and manufacturing offices at the factory.

The shopwork is under the direction of representatives of the cooperating company and the institute, and the recitations in theoretical work during the shop period are held by members of the institute faculty.

The principal differences between this cooperative course and those previously given are stated by Prof. W. H. Timbie as follows:

First. Length of periods for shop and college. This has been thought advisable to permit the student to become familiar with men, methods, materials, and spirit of the department in which the period is spent, although in some cases the student may be placed in several departments during one period. The length of period also reduces the number of changes to 12.

Second. The recognition by the cooperating company that for three years the student is in its plant for the purpose of being educated and trained as a high-grade electrical engineer. There is no attempt to make student labor of value to the company per se, but the work is so arranged that the student may learn manufacturing methods and the best relations of labor, machinery, and materials for proper production. Shifts are made as soon as knowledge of the detail of a department is attained by a student.

Third. A continuity of studies of theoretical and humanistic subjects. This work is carried on at the institute and at Lynn.

Fourth. Required collateral reading. This is done at the Thompson Club, at which the students live together while at Lynn. Here books from the institute library and Lynn Public Library are found. The books permit reading outside the prescribed courses.

Fifth. Intense spirit of loyalty inculcated in members of this course to one another, to the institute, and to the cooperating company.

Sixth. The continuation of the work for three years in one company. Of course the magnitude of the plant of the General Electric Co., at Lynn, makes this cooperative course of great value in that the student will be brought in contact with most manufacturing and business methods in connection with the production of electrical apparatus. The practical training deemed necessary can be obtained with one company.

Seventh. The unusual amount of theoretical work, so that the master's degree can be given at the end of five years.

This cooperative work, as that conducted by Cincinnati, Pittsburgh, Akron, and Massachusetts, is applied to a very limited degree in other institutions. Thus Yale requires a limited amount of summer work; and electrical engineers at Rensselaer may substitute eight weeks of work in an approved plant for the second shop period of four weeks at the institute. Johns Hopkins requires six months of industrial work. At Antioch College summer work as well as term work in the industries is encouraged for the purpose of self-support as well as to train the student in practical details of the profession for which he is preparing. The University of Maine is planning to require work in industrial plants during two summers. DA

One other trend remains to be mentioned. In a number of institutions, civics, citizenship, or United States history has been added to the engineering curriculum. The war probably demonstrated the advisability of such training; and, moreover, there is a desire in all educational institutions to prepare men to take an interest and an active part in civic affairs as well as to fit them for specific work.

The Smith-Hughes Act, approved by the President February 22, 1917, appropriates funds amounting in 1926 to a yearly sum of \$6,000,000 for the purpose of cooperating with the States in providing instruction in agricultural, trade, home economics, and industrial subjects, and in preparing teachers of vocational branches of study on condition that the States appropriate equal sums. The act divides one half of the fund among the States in proportion to the ratio of their rural inhabitants to the total rural inhabitants of the United States for the salaries of agricultural teachers, supervisors, or directors, and the other half in proportion to the ratio of their urban inhabitants to those of the United States for the salaries of teachers, supervisors, and directors of trade, home economics, and industrial subjects. Another appropriation amounting to \$1,000,000 annually is divided

in proportion to the total population of the States for the purpose of preparing teachers.

In carrying out this act a number of the State schools of engineering are offering courses of vocational training. Some of these courses are given in the engineering schools; others are given in the department of home economics, agriculture, or education. The work has been so recent that many institutions have not arranged these courses completely. The following quotations will give some idea of the present condition of the courses in engineering organized to meet the requirements of the Smith-Hughes Act:

WEST VIRGINIA UNIVERSITY, MORGANTOWN, W. VA.

Undergraduate curriculum in industrial education, leading to the degree of bachelor of science.—The object of this course is to prepare young men and women to teach vocational subjects and to supervise vocational work in connection with the administration of the Smith-Hughes Act. This is a new course, and the exact requirements have not been definitely fixed. A total of 128 semester hours will be required for graduation, which must include 10 hours in English, 10 hours in mathematics, a thorough knowledge of one or more trades, 4 hours in mechanical drawing, and 10 hours of vocational industrial education.

UNIVERSITY OF WISCONSIN, MADISON, WIS.

Smith-Hughes courses for those who desire to teach trades and industry or the related subjects as prescribed by State and Federal laws. The department of manual arts will administer courses in accordance with State and National prescription in the training of teachers of trade and industry. At different times in the past the department has been instrumental in organizing special groups of mechanics in order to assist them, by means of short courses, to prepare for teaching in Wisconsin continuation schools or other vocational or trade schools. Under the new organization the department will, if possible, organize similar classes to be given instruction in accordance with the provisions of the Smith-Hughes law and those for the Wisconsin State Board of Vocational Education.

For several years the University of Wisconsin, through the agency of the department of manual arts acting for and with the extension division of the university, has conducted evening courses of study in Milwaukee, Wis., for tradesmen preparing to teach industrial subjects. The department is prepared to continue this work, to modify it to conform to Smith-Hughes requirements, and to assist in the organization and conduct of similar instructional work in other Wisconsin centers. In doing this it will not seek to set up an independent organization, but will endeavor to cooperate in any way possible with local agencies, the Wisconsin State Board of Vocational Education, and the Federal Board of Vocational Education.

A registrant for courses given under the heading of "Vocational courses for teachers of trade and industry" shall be admitted as a special student. Upon the completion of any unit of work or prescribed special course, he shall receive a certificate specifying his accomplishment.

UNIVERSITY OF TEXAS, COLLEGE STATION, TEX.

Course in industrial education.—The course in industrial education has for its main purpose the preparation of teachers of related subjects as prescribed for industrial education under the Smith-Hughes Act. Graduates of this course will be prepared not only to teach related subjects but to teach the regular shopwork ordinarily given in the high schools of the State, to teach shopwork under the Smith-Hughes

Act in schools of cities having a population of less than 25,000, and to direct or supervise industrial education in large city school systems. The course requires contact with a wide range of trades through its shopwork and a liberal education in science, mathematics, history, English, etc. Thorough preparation in the art of teaching and supervising is afforded. The wide range of electives permits the student to specialize in some trade, or to do more extensive work in a wide field.

The State plans for requirements of teachers of related subjects in classes using Federal funds under the provisions of the Smith-Hughes Act which specify that the teacher must have had at least 880 hours of experience in at least two trades. This is to insure adequate contact with shops operated on a commercial basis. Students in this course are expected to get this experience through summer work following the sophomore year and the junior year. The department of vocational teaching will assist in arranging for this work.

BUSINESS ADMINISTRATION.

A course in business engineering has been offered at the Iowa State College. In this course subjects of various courses in the engineering school have been united with administrative courses for application to business. The college makes the following statement:

Large corporations, contracting firms, municipalities, and all employers of technically trained college men are showing an increasing tendency to transfer such men as have made successes in strictly engineering lines into positions of magnitude and trust requiring knowledge of economic relations and business principles. It is true that the engineering graduate has the ambition to own and manage a business. Many men with the training secured in our engineering schools, combined with the principles of economics and rules of business which they have had to acquire slowly, are meeting with the greatest success in positions which require the highest type of business training and qualifications and a minimum of engineering experience.

From such employers of technically trained men and from engineering graduates now in business for themselves has arisen a demand that the engineering schools offer studies in the fundamental principles of business, supplemented with advanced work along lines closely allied with engineering industries. The engineering schools of the country have felt this demand, and many are meeting it in various ways. The problem might be solved most easily by increasing our engineering courses from four to five years, by requiring certain studies related to business during the last two years, and by giving opportunity for free electives. Under present conditions it seems desirable that the studies relating to the fundamentals of business be offered in the regular four-year course.

The intimate relation which must exist between engineering and business is not a new idea at this college. The engineering courses have been requiring or offering as electives many studies bearing directly or indirectly on business relations. The number of such studies and the quality of the work offered are continually being increased and improved. It is believed that there should be no weakening of the essentially technical and engineering side of the four-year courses. It is probable that the marked success with which many men with engineering training are filling business positions is due to personality and opportunity combined with habits of logical and independent thinking acquired in large part while completing an engineering college course and supplemented by later experience.

The subjects of this course include the following:

Architectural engineering: Elements of contracting.

Civil engineering: Estimating and cost keeping, engineering reports, professional practice, railway operation and administration.

Economic science: Money and banking, public finance, American labor, distribution of wealth, economics for engineers, accounting, business law, rural sociology.

Engineering: Specifications and contracts, history of engineering.

English: Main elements of composition, exposition, narration and description, argumentation.

History: Industrial history of the United States, history of labor in the United States, financial history of the United States, history of foreign relations of the United States, American Government, municipal government.

Agricultural journalism: Beginning technical journalism, feature writing for technical journals.

Mathematics: Statistical method of interpreting experimental data.

Mechanical engineering: Power plant engineering, industrial engineering, industrial organization, scientific management.

Mining engineering: Mining engineering, mine administration, and mining law.

Public speaking: Extempore speech, debating, advanced public speaking.

JUNIOR COLLEGE.

During the last few years the development of the junior college in connection with the high schools of a number of cities, the division of the work at the university into an upper and lower division and also to give engineering in two years to graduates of colleges of arts and sciences, has caused some engineering schools to rearrange their curricula so that with a little extra work men with preparation can graduate with two years of engineering work. The junior college and its many advantages have been discussed in the Report of the United States Commissioner of Education for the year 1920. The division of university work into upper and lower divisions has been practiced for many years at Chicago, it being recognized by others that the work of the first two years of most colleges and schools is a continuation of high-school work, and as such it is distinct from the work of the two latter years. The recognition of this has made possible the acceptance of work done in postgraduate high-school courses or junior colleges.

RÉSUMÉ.

To give in a brief form the progress of engineering education during 1918-1921, it may be stated that during this period there has been manifest a greater desire to stress fundamental studies to the exclusion or removal of certain applied studies, an elimination of modern language by some and an increase of English, an increase in the study of economics, history, civics, and business methods, an inclusion in the early years of motivating courses, a wider use of the problem method of teaching, and finally a desire to decrease the number of courses by the grouping together of short courses.

DATA FROM REPLIES.

The following digest of replies gives the data for the foregoing report:

Antioch College, Yellow Springs, Ohio.—The reorganization program for the college includes cooperative work in all branches of study. The trustees of Antioch College have determined to reorganize along the following lines:

1. Student self-support by a division of time between college study and remunerative work, the college program being arranged accordingly.
2. A combination of practical experience with academic study, preferably in the calling for which the student is preparing himself.
3. Allowance of credit for actual accomplishment and not for "clock hours" spent in any given subject. (It is estimated that the average student will require 6 years to complete a course of study requiring full time for 4 years.)
4. The college will offer liberal arts courses and a limited number of technical courses. In the belief that the best results can be secured by a comparatively small faculty of high-grade men and women, the number of regular liberal arts courses will be limited to about 80, which is less than half the number usually offered in small colleges.
5. Except for students who show marked ability in any department, liberal arts courses will deal only with the fundamentals of their subjects. For students who do show such ability, autonomous courses will be provided. That is, for advanced work, well-considered courses will be offered, with library and laboratory facilities, and with occasional access to the heads of departments or other competent authorities for advice. Thereupon the student will carry the advanced work in the manner of a seminar.
6. There must be coordination between different courses, so that the college will be a synthetic unit and not an aggregation of unrelated departments each bidding for the students' time and interest.
7. A limited number of technical courses will be offered. A technical course must include the fundamentals of a liberal arts education, as it is the aim to make citizens as well as technicians. These courses will aim to develop general competency rather than highly specialized technique, and to prepare men and women for callings for which adequate preparation is not now being given in colleges and universities. They will aim to make men directors of industry rather than employees working under detailed directions.
8. The college will aim to eliminate the traditional cleavage between cultural standards and practical standards and to make practical life for its students a medium of expression for such cultural standards and ideals.
9. Physical fitness is a primary condition to happiness and success. Students will be required to care for their physical condition in order to remain in the institution.
10. The final measure of accomplishment will be the success attained in turning out students whose preparation has laid the basis for productive service and whose primary aim is service to their communities and to their times. No paper program will accomplish this result, but only the spirit with which the college may be imbued. The chief hope of the trustees is to secure a faculty and a student body that will make this result possible.

California Institute of Technology, Pasadena, Calif.—The institute has changed from a two-term to a three-term year. Modern language has been eliminated, being replaced by English, history, current topics, and geology. A new course, physics and engineering, has been introduced.

Carnegie Institute of Technology, Pittsburgh, Pa.—No important changes. Discussing return to two semesters from four quarters.

Case School of Applied Science, Cleveland, Ohio.—The present day requests for engineers indicate the importance of students using summers for work in industrial plants so as to better understand labor and industrial problems. This work is not required at present, but the requirement is being considered. The experience of the school indicates that preparatory work is not being done as well as it was before the war. A tendency to student organization is more manifest than formerly.

College of the City of New York, New York, N. Y.—The school of technology was recently organized. Although contemplated for some time, the war accelerated the inauguration of this new school. The chemical engineering course is such that B. S. is given at the end of four years and Ch. E. at the end of the fifth year.

The freshman year contains public speaking, analytic geometry, calculus, English, a foreign language, chemistry, descriptive geometry, mechanical drawing, American Government, citizenship, physical training, and military training.

For sophomore year: Prose and poetry, declamation, English, history, physics, qualitative analysis, geology, evolution of industry, causes and cures of diseases, defense of health, and military training.

For junior year: Debate, physical laboratory, organic chemistry, philosophy, machine design, qualitative analysis, electrochemistry.

For senior and post senior years the subjects are technical with the exception of courses in debate, business organization, and commerce.

The courses in mechanical engineering, electrical engineering, and civil engineering are the same as the above for the first two years and differ in the technical subjects of the last years. There are small differences in the first two years, but these differences are due to sequence. In all four courses there is training given in history, philosophy, civics, hygiene, and business. Economics is included in certain courses.

The announcement of the school contains the following quotations:

"These technical courses as established cover a period of five years. During the first two years the work required consists almost entirely of necessary prescribed collegiate science subjects, the better to prepare and develop the mind of the young student for what is to follow. The third and fourth year subjects taken up are to a very great extent strictly in engineering, but so arranged that the student is upon completion of the fourth year eligible for the degree of bachelor of science.

"Then, after an additional, or fifth year, of purely advanced technical engineering subjects, he receives the degree of chemical, civil, electrical, or mechanical engineer.

"In each instance the ground covered by the course has been carefully studied and thought out by a corps of well-equipped technical and practical instructors, each one thoroughly conversant with his particular branch. The purpose is to make the course fundamental rather than intensive along any particular line.

"The collegiate work is largely cultural in character, in order to secure in the education of the engineer a much broader range than if confined only to the engineering field.

"Upon completion of the entire course the graduate is thereby better equipped to go into the business world and meet the problems of life; he is better fitted to take his place as an executive with big financial, operating, and construction interests.

"Owing to the great development in the industrial world and the rapid advancement of this country as a financial and commercial power, the field of the engineer is much larger than heretofore. There has always been a dearth of men fitted to fill the higher positions; there is at present and will be for a generation to come a considerable demand for trained men in all grades. There is hardly a line of endeavor which does not require the advice, cooperation, and assistance of the engineer.

"Many of the engineering subjects are given in the evening session for the benefit of those who are employed during the day. These evening courses are identical with the day work in so far as the scope and thoroughness are concerned. They are meant to meet the needs of those who are engaged during the day but wish to secure a technical education and better their condition."

Columbia University, New York, N. Y.—In 1919-20 numerous readjustments took place to accomplish four objects:

1. A better selection of subjects to study.
2. The avoidance of nearly similar courses given similarly for different groups of students.
3. Reduction in number of different subjects of study pursued at the same time.
4. A reasonable total weekly requirement of class, laboratory, and study hours.

The university offers a new course in industrial engineering. This is largely a course in mechanical engineering until at the later end of the course the subjects of organization, management, and business methods are given.

The courses in engineering at Columbia require three years of college work for entrance, and three years are required for completion of the courses.

Cornell University, Ithaca, N. Y.—The experiences of the war have been to accent the practical side of vocational training and to reduce to a minimum the training necessary to produce men of specific types. Although a number of special courses in military engineering were requested, the engineering school has only introduced courses in ordnance engineering and signal engineering. The general tendency has been to give broad training to the engineers rather than more special engineering work relating to the particular branch giving its name to the department.

Economics, English, and other general subjects are being added to the engineering courses. All engineering instruction has been combined into one college which will now be known as the college of engineering and will consist of three divisions offering the degrees of civil engineer, mechanical engineer, and electrical engineer. The curriculum will be the same for all students during the freshman year. The civil engineering students will have a slightly different course during the sophomore year from those in the two other departments. At the end of the second year all three departments will be under different schedules.

University of Dayton, Dayton, Ohio.—The curriculum provides for ethics, psychology, and logic to succeed or to be taken conjointly with economics.

University of Florida, Gainesville, Fla.—All courses are the same for one year and for mechanical engineers and electrical engineers for two years. Selects best men for admission, as capacity is limited. Advocates higher standards rather than expansion.

State University of Iowa, Iowa City, Iowa.—Civil, electrical, and mechanical engineers have three years in common, and in senior year one-third of their work is common. The chemical engineering course has been extended to five years. The Students' Army Training Corps made clear the value of supervised study.

Johns Hopkins University, Baltimore, Md.—The following changes have been made:

1. Transference of applied mechanics from third year to second year.
2. Introduction of course in general engineering for freshmen. Course is given by various faculties in turn.
3. The increase of the requirement of three months in industrial work to six months.

University of Kansas, Lawrence, Kans.—Changes made during the years 1918-1920 have been as follows: Establishment of a complete schedule in engineering and administrative science; a course in elementary economics for all students; elimination of shopwork for civil engineers, and the introduction of elementary geology into the freshman year; the permission of substitution of other work for modern languages; the omission of modern languages for students of the Reserve Officers' Training Corps; the introduction of an option for civil engineers and the introduction of a four-year course in architecture.

The university is considering the provision for freshman students who enter with one year of training in algebra and geometry and a further reduction of the modern-language requirement.

Lafayette College, Easton, Pa.—The college has made a complete revision of the curricula in civil, electrical, mechanical, and chemical engineering, for the following purposes:

1. To give the freshmen some real engineering problems in their first term, to establish some connection in their minds between their mathematics and actual engineering. These courses were taught by the heads of the engineering departments.

2. To reduce the number of credit hours per week, each credit representing three hours of the student's time, to 17 or 16 if possible.

3. To provide electives for engineering students in the so-called cultural subjects. The greatest number of such credits was required in the civil engineering course, i. e., 18 credits.

4. To reduce the number of subjects studied in any given term to 5 or 6, or less if possible.

5. To introduce the laboratory method of instruction, i. e., problem work in class, so that assistance and corrections may be made immediately by an instructor. These laboratory periods were made three hours in length and introduced into courses in mathematics, mechanics, and materials. These are distinct from experimental laboratory periods.

6. To relieve the pressure on the curriculum by eliminating courses on the applications of engineering and putting more time on fundamentals. For example, such courses as telephone engineering, aeronautics, advanced structural design, etc., were either omitted or made elective by groups.

These changes, which have been in operation for two years, are now being revised in the light of this experience. Certain courses will be shortened, while others will be extended. There is a tendency to combine a number of shorter courses into one larger course. No modern language is required for engineering students with the exception of those taking chemical engineering.

The electives available for engineering students are American history, government, sociology, labor problems, ethics, applied psychology, and similar subjects.

Lehigh University, Bethlehem, Pa.—Scholastic changes of minor character such as might normally be made have been made during the period. These have not been caused by experience during the war.

In February, 1919, a unit of the Reserve Army Training Corps was established with voluntary enrollment. The work in military science and tactics was made obligatory on all students entering the university.

Leland Stanford Junior University, Stanford University, Calif.—The mechanical engineering department gives, during the four years of undergraduate curriculum, a course which is intended to represent common training for five years of work in both mechanical and electrical engineering. Students at the end of four years receive the degree of A. B. in mechanical engineering, following which, after a year of further work along either mechanical or electrical engineering lines, they receive the degree of engineer in mechanical or electrical engineering.

Changes during 1918-1920 have been due to the fact that the first two years of undergraduate work at Stanford constituted a so-called lower division, and it has been necessary to readjust certain courses to care for this type of organization. The rearrangement has the effect of providing a more regular and definite manner for certain general courses, including modern languages, history, literature, and biological science. The university work is arranged so that after four years the student receives the degree of A. B. and the fifth year leads to the degree of engineer.

Courses are given in civil engineering, mining engineering, mechanical engineering, and chemical engineering. Electrical engineering is given as graduate work.

University of Maine, Orono, Me.—The faculty is considering requiring work in industrial plants during two summer vacations.

Michigan Agricultural College, Lansing, Mich.—New courses introduced with common freshman year for all, 20 per cent differentiation in sophomore year, and slightly more in junior and senior years; 60 per cent of work of all four courses is the same. Former courses were common for two years, with 72 per cent of the entire work of the

four courses the same. An optional group of economics, English, French, and Spanish for three hours for senior year is now part of the four courses.

New Hampshire College, Durham, N. H.—The college gave courses in engineering and construction. The courses in mechanical and electrical construction have been abolished, and an industrial course given, so that the engineering division offers courses in mechanical, electrical, and chemical engineering, architectural construction, and a four-year industrial course. This latter course requires one year of mathematics and a wide range of electives during the last two years, enabling a student to fit himself to enter the industrial or manufacturing field, to become a sales engineer, or to prepare himself to teach under the Smith-Hughes Act.

New Mexico State School of Mines, Socorro, N. Mex.—Desire to eliminate some theoretical work and to substitute practical subjects therefor.

Norwich University, Northfield, Vt.—The amount of modern languages has been decreased from two years to one year, while the amount of English has been increased from one year to two years. The work in physical laboratory has been doubled, and the time devoted to theoretical mechanics has been decreased. A course in elements of mechanism has been added, as well as a short course in business organization and finance.

In the senior year a course has been added in engineering abstracts.

University of Oklahoma, Norman, Okla.—A course has been introduced in second-term freshman year in applied engineering. Economics has been extended to include elementary accounting, cost accounting, business organization, management, and business law. Experience during the war has led to elimination of design work for undergraduates.

Pennsylvania College, Gettysburg, Pa.—Changes of a minor nature have been made. War experiences were not long enough to suggest any changes. The problem method as used at Camp Humphreys has been applied with only moderate success, owing to the younger age of the students at the college compared with those in the Army. There was a lack of effort on the part of most of the students. To obtain moderate success a large number of instructors would be necessary.

Rensselaer Polytechnic Institute, Troy, N. Y.—Extension of English to a course in second term senior year, including report writing, correspondence, and technical papers; minor readjustments of courses to care for larger enrollment with present-laboratory equipment. Changes have made the load upon laboratories more uniform, permitting the same effective work to be done with a larger number of students.

Rhode Island State College, Kingston, R. I.—Changes of minor importance have been made, resulting from an effort to produce harmony in various phases of the work of the institution. Certain modern language has been omitted from the sophomore year for the additional work in chemistry by the chemical engineers.

Certain condensations of courses in electrical engineering have been made to introduce mechanisms and making the mechanical and electrical engineering courses the same to the beginning of the junior year.

Rutgers College, New Brunswick, N. J.—No particular changes have been made in the course of instruction. Certain changes will probably be made on the appointment of a new dean.

University of Santa Clara, Santa Clara, Calif.—A simplification of courses as much as possible, avoiding all specialization in a four-year course, emphasizing English, and more thorough grounding in fundamentals.

Sheffield Scientific School of Yale University, New Haven, Conn.—The courses in Sheffield scientific school of Yale University have been changed to four-year courses, with the degree of B. S., in place of the three-year course leading to the degree of Ph. B. The various engineering courses have been made to include general subject of history and English of about 13 per cent; science subjects of chemistry, physics and mathematics of 31 per cent; engineering, including drawing, laboratory work, as

well as theory, 46 per cent; administrative subjects, including economics, accounting, and management, 8 per cent; electives in engineering and administrative work, 2 per cent. Although the figures above are for the mechanical engineering course, the civil and electrical engineering courses correspond with this quite closely. The school has established a course in administrative engineering, with 13 per cent of the work in general subjects, 24 per cent in science, 28 per cent in engineering, 21 per cent in administration work, and 14 per cent in electives.

South Dakota State School of Mines, Rapid City, S. Dak.—The school has been enlarged to graduate civil engineers and electrical engineers, in addition to those courses which have been given for years in mining engineering and metallurgical engineering. The first engineering degrees are given at the end of a four-year course, and advanced degrees are given not earlier than two years after graduation in practice or after one year of graduate study. Some of the courses have been rearranged to give courses in business management.

University of South Dakota, Vermilion, S. Dak.—Course in engineering technology for all freshmen. The work is given by C. E. department for first term, M. E. department second term, and E. E. department third term. Three terms are to be changed to two semesters.

Stevens Institute of Technology, Hoboken, N. J.—No changes to report.

Union College, Schenectady, N. Y.—The course in civil engineering has been revised by giving two options, one known as the technical option, the other as the administrative option. These options are the same for the first two years, which include, with the scientific and engineering subjects, foreign language, English, American history, and public speaking. In the junior and senior years the administrative option contains the subjects of psychology and European history in place of reinforced concrete construction. Both options contain business administration, including economics, accounting, business law, finance, banking, and contracts and specifications.

The administrative option contains important subjects in civil, mechanical, and electrical engineering, and has an unusually large percentage of business administration and cultural subjects: 26 per cent of the course is devoted to science, 39 per cent to engineering, 10 per cent to business administration, and 25 per cent to cultural subjects.

Washington University, St. Louis, Mo.—A readjustment has been made in all curricula.

State College of Washington, Pullman, Wash.—Changes have been made to include course in commerce and also to give distinct courses in management engineering, commercial mechanical engineering, and commercial electrical engineering. The courses in civil engineering, mechanical engineering, and electrical engineering have been continued; and in these, special courses in engineering economics have been substituted for special courses in the various curricula. The new courses have been introduced in response to the general trend of public opinion.

Worcester Polytechnic Institute, Worcester, Mass.—Nothing to report. The institute gives great importance to industrial management.

DATA FROM CATALOGUES.

In addition to the institutions sending letters, certain institutions sent catalogues. From the catalogues received in response to the communication from the Commissioner of Education the following has been obtained:

University of Akron, Akron, Ohio.—Five-year cooperative course, patterned after the Cincinnati plan, organized in 1914. Changes made at end of periods of two weeks.

Year is composed of 11 months. Holidays of one week at Christmas, one week at Easter, and two weeks at end of summer. Degrees of C. E., M. E., E. E., and B. S. in Manufacturing Production. English and modern languages begin in the third year. Modern languages are continued for three years and English for two years. Economics is given for one year.

Alabama Polytechnic Institute, Auburn, Ala.—Common freshman year. English, three years, with English or economics for fourth year; no modern language; history, two years.

University of Alabama, University, Ala.—English, one year; no modern language; economics in one year.

University of Arizona, Tucson, Ark.—Two years of English; one year modern language.

University of Arkansas, Fayetteville, Ark.—Two years the same for all engineers. English, one year; economics, one-third year.

Brooklyn Polytechnic Institute, Brooklyn, N. Y.—English, two years; modern language, two years; history, one year; economics, one-half to one and one-half years. Five years required for chemical engineers.

Brown University, Providence, R. I.—One course only in engineering. English, two years; economics, one year; engineering electives and approved electives.

University of California, Berkeley, Calif.—No English or foreign language required if preparation is sufficient. Electives.

Catholic University of America, Washington, D. C.—English, two years; modern language, philosophy, and economics, each one year.

University of Cincinnati, Cincinnati, Ohio.—Four-year theoretical courses and five-year cooperative courses, with alternation between shop and university every two weeks. The latter course has year of 11 months. The first two years of all courses are about the same. English every term. Modern language required for two years in chemical engineering and one year for others. Certain courses require economics, management, and history.

Clarkson School of Technology, Potsdam, N. Y.—Three terms to one year. Five terms common to all courses. English, one year; economics, one year; modern language, one year.

University of Colorado, Boulder, Colo.—English one and one-third years; no modern language.

Colorado Agricultural College, Fort Collins, Colo.—English, one year; no modern language.

Dartmouth College, Hanover, N. H.—Two-year course in Thayer School of Civil Engineering after three years of college work. Suggested preparation: One year each in sociology, political science, psychology, civics, and one and one-half years in English and modern language, and two years in economics.

Des Moines College, Des Moines, Iowa.—English, public speaking, each one year. Electives from modern languages, English, commercial law, bookkeeping, business efficiency, accounting, and social sciences.

University of Florida, Gainesville, Fla.—One year in common. English, two years; economics, one-half year; law, one-half year; sociology, one-half year.

George Washington University, Washington, D. C.—One year in common for C. E., M. E., E. E. English one year and modern language one year.

University of Georgia, Athens, Ga.—History and English, one year; modern language, two years.

Georgia School of Technology, Atlanta, Ga.—One year common to all. English, two and one-half years; modern language, two years; economics, one-half year.

Harvard University, Cambridge, Mass.—English one year, or may be credited from preparatory work. Two modern languages which may be offered for admission. Accounting and business administration one year. An elective is allowed in each of the first three years.

Howard University, Washington, D. C.—English, one year; modern language, two-thirds year; law and economics, one year.

University of Idaho, Moscow, Idaho.—One year common; English, two years; modern language one year for chemical engineers, contracts and specification for other engineers.

University of Illinois, Urbana, Ill.—One year English, one year modern language, three to four terms of nontechnical electives.

Iowa State College, Ames, Iowa.—English, one and two-thirds years, no modern language; one quarter of specifications and contracts, one quarter of history of engineering, one quarter of engineering economics, one quarter of accounting. A course in business engineering is made up of subjects from the various courses at the college for application in business.

Kansas State Agricultural College, Manhattan, Kans.—English, two years; economics, one year; business law, one semester; history, one semester; no modern language.

Lehigh University, Bethlehem, Pa.—English, one and one-half years; modern language, one or two years; economics, accounting, law, finance, contracts, each one-half year.

Lowell Textile School, Lowell, Mass.—English, one year; modern language, two years; economics, one year; business administration, one year.

University of Louisiana, Baton Rouge, La.—English, two years. No modern language.

University of Maryland, College Park, Md.—English, three years; modern language, two years; history, one year; economics and law, one year.

University of Michigan, Ann Arbor, Mich.—English, one year; modern language and cultural subject, three years; law, one term, options two years.

Michigan College of Mines, Houghton, Mich.—English, one and one-half years.

University of Minnesota, Minneapolis, Minn.—One year common. English, one year; electives in economics, government, finance, law, accounting.

University of Missouri, Columbia, Mo.—One year common. Citizenship, one year, economics, one term; English, one term; no modern language.

University of Montana, Bozeman, Mont.—English, two years; economics, one year; specifications and contracts, one-third year. No modern language.

University of Nebraska, Lincoln, Nebr.—One year common. English, one year; modern language, one year for civil engineers. A six-year combined academic-engineering course is offered.

University of Nevada, Reno, Nev.—English, one year; four terms of electives. No language.

New Mexico School of Mines, Socorro, N. Mex.—Two years in common. English, two years; modern language, two years.

New York University, New York, N. Y.—English, two years; modern language, two years; economics and industrial history, one year. A course is offered in business and engineering.

North Carolina State College, West Raleigh, N. C.—One year in common. English, three years, one year modern language. English, economics, industrial engineering, or modern language, one year.

University of North Carolina, Chapel Hill, N. C.—English, one year; modern language, two-thirds year; law, one-third year.

North Dakota Agricultural College, Fargo, N. Dak.—English, one and one-third years; history, one-third year; social science, one-third year.

University of North Dakota, University, N. Dak.—One year in common. English, one and one-half years; modern language, an elective. Economics, one term for certain courses.

Northeastern College, Boston, Mass.—English, one year; no modern language.

Norwich University, Northfield, Vt.—English, two years; modern language, one year; law, one year; economics, one year.

New Mexico College of Agriculture and Mechanic Arts, State College, N. Mex.—English, one and two-third years; modern language, one year; economics, sociology, and business law, one year.

Ohio State University, Columbus, Ohio—One year in common. Modern language, one year; English, one year.

Ohio Northern University, Ada, Ohio—English, option; languages, option.

Oklahoma Agricultural and Mechanical College, Stillwater, Okla.—One year common. English, one and one-half years; modern language, one year for chemical engineers, electives equivalent to four years; economics, one and one-half years.

Oregon Agricultural College, Corvallis, Oreg.—English, one year; public speaking, one-third year; economics, one year.

Pennsylvania State College, State College, Pa.—One year common. English, two years; modern language, two years; economics, one year; law, one-half year; history, one-half year; political science, one-half year.

University of Pennsylvania, Philadelphia, Pa.—English, two years; modern language, two years; law, one year; economics, one-half year for mechanical engineers and electrical engineers.

University of Pittsburgh, Pittsburgh, Pa.—Work in four terms of three months each in some engineering industry in the Pittsburgh district is required of every student before graduation. This work is supervised. One year in common. English, one and one-half years; modern language, two years; economics, one and one-half years; philosophy and psychology, one year.

Polytechnic Institute of Brooklyn, Brooklyn, N. Y.—English, two years; modern language, two years; history, one year; economics, one-half to one and one-half years. Five years required for chemical engineers.

Princeton University, Princeton, N. J.—English, two years; modern language, two years; economics, two years; business methods, one term; electives, two years.

Purdue University, Lafayette, Ind.—English, one and one-half or two and one-half years; modern language, two or three years; economics, one-half year; history, one-half year; law, one-half year.

Rose Polytechnic Institute, Terre Haute, Ind.—English, one and one-half years; modern language, two years; economics, one-half year.

University of South Carolina, Columbia, S. C.—English, one year; modern language, one year.

University of Southern California, Los Angeles, Calif.—English, one year; law, one-half year; electives, three years.

University of Tennessee, Knoxville, Tenn.—Two years in common. English, two years; modern language, two years; law, one-half year.

Agricultural and Mechanical College of Texas, College Station, Tex.—One year in common. English, four years; history, one-half year; economics, one-half year.

Tulane University of Louisiana, New Orleans, La.—English, one or two years.

University of Utah, Salt Lake City, Utah—Two years in common. English, one-third year. Economics, one-third year; business methods.

Valparaiso University, Valparaiso, Ind.—English, one year.

Vanderbilt University, Nashville, Tenn.—One year in common. English, one year.

Villanova College, Villanova, Pa.—English, two years; modern language, two years; law, one-half year.

Virginia Polytechnic Institute, Blacksburg, Va.—English, three years; modern language, three years; economics, one year.

State College of Washington, Pullman, Wash.—English, one and one-half years; economics and law, one year. Courses in commercial mechanical engineering and

commercial electrical engineering, giving economics, business administration, finances, investments, and contracts.

Washington and Lee University, Lexington, Va.—English, one year; modern language, two years.

West Virginia University, Morgantown, W. Va.—English, one year; law, one-half year.

University of Wisconsin, Madison, Wis.—English, one year; law, one-half year.

University of Wyoming, Laramie, Wyo.—One year in common; English, one year; electives, three years.

CHAPTER X.

MEDICAL EDUCATION.

By N. P. COLWELL, M. D.,

Secretary of the Council on Medical Education and Hospitals of the American Medical Association, Chicago.

CONTENTS.—I. Progress in 20 years—More qualified students and graduates. II. Developments in medical schools—(1) Limitation of enrollments in medical schools—Do we need more medical schools?—(2) Increased cost of medical education—(3) Demand for teachers in the fundamental sciences—(4) Specialization in medical practice—(5) Revision of the medical curriculum—(6) Migration of physicians from rural communities to cities. III. Essential education for all who are to treat the sick—Confusion in medical licensure—A few victories of scientific medicine—Outlook for an improved medical education.

I. PROGRESS IN TWENTY YEARS.

As shown in previous reports, following the close of the Civil War the number of medical schools in the United States rapidly increased until in 1906 there were 162—more than in all the rest of the world. The educational standards, however, were considerably lower than those in other leading countries; so that the evident need was for “fewer but better medical schools.” Two of the important objects to work for in the campaign for improvement, therefore, were (a) the general adoption of higher standards for admission, and (b) the merging of medical schools in cities where two or more existed. During the past 18 years the number of medical schools has been reduced by just one-half—from 162 to 81—about two-thirds of the reduction being due to mergers. The medical schools which became extinct, with a few exceptions, were low-grade institutions.

The number of colleges enforcing higher entrance requirements during the 18 years increased from 2 to 74; and the entrance requirements of medical schools of the United States are now equal to those in medical schools abroad. These changes are graphically shown in Chart 1.

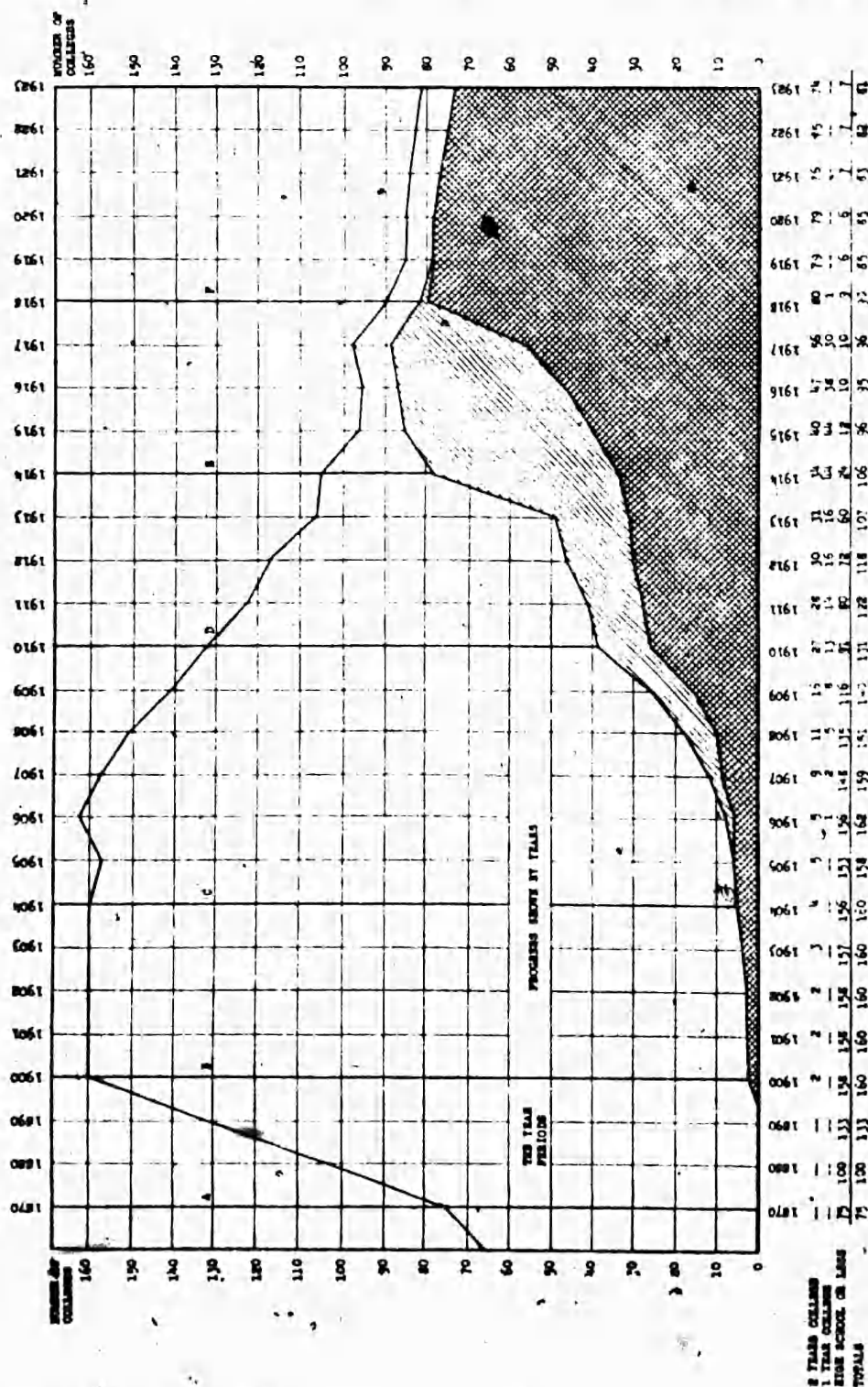
The heavy line in the upper part of the chart shows the total number of medical colleges existing in each year.

The shaded portion of the chart shows the number of medical schools in each year which required for admission one year of college work (light shading) and two or more years of college work (heavy shading).

From the best available information, it appears that, prior to 1900, less than one-fourth of the medical schools required even a high-school education for admission. In 1907, about 80, or approximately one-half, and in 1910 about 100, or three-fourths of the medical schools, announced an entrance requirement of at least a high-school education. In the other colleges a common-school education was all that was necessary to secure admission.

Six epochs in the development of medical schools are shown in the above chart, as follows:

A. During the decade from 1870 to 1880, through the work of Pasteur and other medical research workers, the germ origin of the common diseases was definitely



established. During the 30 years ending in 1900, the number of medical schools in the United States was rapidly multiplied, increasing from 75 to 160;

B. In 1900 the Journal of the American Medical Association began collecting and publishing statistics in regard to medical schools and medical education;

C. In 1904 a permanent committee, the Council on Medical Education, was created by the American Medical Association to work for the improvement of medical education in the United States;

D. In 1909-10 the Carnegie Foundation for the Advancement of Teaching, in conjunction with the Council on Medical Education, made an investigation of medical schools, and in the latter year published its report;

E. In 1914 the requirement of at least one year of college work; and—

F. In 1918 of two years of college work was made an essential for the Class A rating by the Council on Medical Education.

TABLE 1.—*Enrollments of medical students for nine years, showing variation in numbers by classes.*

College session.	Freshmen.	Sophomores.	Juniors.	Seniors.	Intern year.	Total.
1914-15	3,373	3,919	3,675	3,854		14,891
1915-16	3,582	3,094	3,559	3,727		14,022
1916-17	4,107	3,117	2,866	3,674		13,764
1917-18	4,283	3,521	2,893	2,933		13,630
1918-19	3,104	3,587	3,272	2,967	122	13,052
1919-20	4,234	2,837	3,464	3,263	290	14,088
1920-21	4,825	3,588	2,637	3,416	406	14,872
1921-22	5,412	4,219	3,355	2,649	505	16,140
1922-23	5,224	4,626	3,972	3,278	600	17,700

¹ Estimate.

The constant line drawn through the table underscores the figures which show the lowest ebb in the enrollment in the respective classes following the adoption of higher entrance requirements. A temporary diminution in the numbers—figures underscored by the dotted lines—began with the freshmen in 1918-19, which was due to the enlistments in the World War. While the figures for 1922-23 are estimated, they are fairly accurate, since reports from all but a few colleges were obtained.

MORE, WELL-QUALIFIED STUDENTS AND GRADUATES.

The merging of medical schools resulted also in a decrease in the number of medical students. The oversupply of medical schools in 1904 meant also an oversupply of medical students. The total number was reduced from 28,142 in 1904 to 13,052—the lowest number—in 1919, but since that year the number increased to 14,088 in 1920, to 14,872 in 1921, and to 16,140 in 1922. The reduction in the number of students was of those having lower educational qualifications, while the number of those in the higher-standard medical schools increased from 1,761 in 1904 to 15,477 in 1921.

Although the total number of graduates decreased from 5,742 in 1904 to 3,192 in 1921, the number of those graduating from the higher-grade medical schools increased from 369 in 1904 to 3,112 in 1921. There were only 2,529 students graduated in 1922, this being the small class which entered the medical schools in 1918, the war year. The numbers who will graduate in 1923, in 1924, and in 1925 are estimated at 3,200, 4,100, and 5,200.

The enrollment of students by classes during nine years is shown in Table 1. The lowest enrollment resulting from higher entrance standards began with the freshman class entering in 1914, culmi-

nating in the lowest number of students in all classes in 1918-19. A secondary wave of low enrollment began with the freshman class entering in the fall of 1918—the World War year—which culminated in the smallest number of graduates in 1922.

II. DEVELOPMENTS IN MEDICAL SCHOOLS.

The developments in medical schools during the past 20 years have been so extensive as to be almost sensational. The improvements in admission requirements, as shown in Chart 1, have been paralleled by similarly rapid improvements in other respects: Endowments of medical schools have been increased; new and larger buildings have been erected; more and better equipped laboratories have been added; well selected libraries have been installed; more all-time and better trained professors have been secured; new and larger teaching hospitals have been built, or a larger control of other hospitals has been secured; and greatly improved methods of instruction have been adopted.

Indeed, these developments were absolutely essential to enable the medical schools to provide instruction in accordance with the present-day knowledge of medicine. Besides the changes in the character of the medical school and of medical education, the great expansion of medical knowledge is also making necessary improved methods in other directions. Several problems have arisen directly or indirectly from the more complex medical training which is now furnished to medical graduates. Some of these are as follows:

- (1) Medical schools have found it necessary to limit the enrollment of students.
- (2) The cost of furnishing a medical education has been tremendously increased.
- (3) There is a larger demand for skilled teachers, especially in the fundamental medical sciences or preclinical subjects.
- (4) There is an increasing trend toward specialization and group practice of medicine.
- (5) There is a growing demand for a revision of the medical curriculum by which the laboratory and clinical subjects will be better correlated.
- (6) There has developed a complaint regarding the lack of general practitioners, especially in the thinly settled or rural districts.

1. LIMITATION OF ENROLLMENTS IN MEDICAL SCHOOLS.

A few decades ago the medical course consisted mainly of didactic lectures, and no limitation of enrollments was necessary. As classes grew larger, the size of lecture amphitheaters was increased, in some instances providing seats for classes of 500 or more students. Even after laboratory courses were added, these schools provided enor-

mous laboratories, particularly in anatomy and chemistry; and a few colleges had laboratories large enough in which to teach at one time several hundred medical, dental, and pharmacy students.

Of the modern medical school, however, the curriculum has become more complex, and the students are taught largely in small sections, especially in dispensaries and hospitals; so that a larger number of individual teachers is required, and administration is more difficult. To prevent confusion and to secure the maximum efficiency, therefore, it has become necessary for medical schools to admit no more students than their teachers, laboratory space, and available hospital and dispensary facilities will permit.

At present 47 medical schools are limiting their enrollments to 25 to 125 students in each class, and report a total capacity for 11,925 students. Nineteen others have an estimated capacity for 4,400 students, making a total capacity in the 66 Class A medical schools for 15,925 students. During the session of 1921-22 these colleges enrolled 11,625 students, while 1,515 were in Class B and Class C colleges.

TABLE 2. —Capacity of medical schools under limited enrollments.

Colleges.	Number of colleges.	Total enrollment—					Average per college.
		First year.	Second year.	Third year.	Fourth year.	Total for 4 years.	
Class A medical colleges:							
4-year colleges.....	42	3,185	2,050	2,900	2,970	11,105	267
2-year colleges.....	5	165	165			330	66
Estimated highest capacity with efficiency:							
4-year colleges.....	14	1,145	1,005	930	900	3,980	274
2-year colleges.....	5	210	210			420	84
Total, class A colleges.....	66	4,705	3,430	3,830	3,870	15,925	691
Class B colleges:							
Capacity reported.....	3	120	120	125	125	490	163
Capacity estimated.....	3	100	100	100	100	400	133
Total, class B colleges.....	6	220	220	225	225	890	296
Total, A and B colleges.....	72	4,925	3,650	4,145	4,095	16,815	234

Sixteen class A medical schools report that, by adding additional teachers or by enlarging certain laboratories, or by other minor modifications, provision can be made for 1,500 more students, thereby increasing the capacity of the 66 class A schools to 17,425 students—about 1,200 more students than were enrolled in all medical schools in 1922.

Eleven medical schools teach only the subjects contained in the first two years of the medical course. Two of these—the Universities of Missouri and Wisconsin—are now preparing to give the complete four-year medical course.

DO WE NEED MORE MEDICAL SCHOOLS?

Well qualified students applying for admission to medical schools have rapidly increased in number in the past three years (1920-1922). This, coupled with the tendency of medical colleges to limit their enrollments, has caused some anxiety lest some well-qualified students will be unable to secure admission to acceptable medical colleges. To prevent such a condition, some medical schools which have placed their limits at extremely low numbers—25 or 30 in a class—should enlarge their facilities so as to admit larger numbers. A medical school with a complete corps of instructors should be able to handle from 50 to 75 students in a class. The enrollment of smaller numbers causes a serious disproportion between the fees paid by the student and the much larger sum expended for his instruction. Unfortunately, some medical schools are not sufficiently financed to care for even moderate-sized classes. In a recent report on medical education,¹ Dr. Henry S. Pritchett points out that to solve the problems of medical education, instead of building up a small number of richly endowed medical schools, the moderately endowed medical schools scattered throughout this country should be sufficiently financed to enable them to provide a modern training in medicine. Doctor Pritchett says that an important construction work is "to restore medical schools in some communities where they have been abandoned and in other communities to aid weak schools that sincerely seek their own improvements." It is very evident that a few hundred thousand dollars distributed among smaller but deserving medical schools at the present time would be of greater service to the public than additional millions given to one of the few institutions which are already so generously endowed.

2. THE INCREASED COST OF MEDICAL EDUCATION.

The cost of conducting medical schools has been tremendously increased during the past 25 years. Buildings have been enlarged and made more numerous, making necessary a greater cost for lighting, heating, and janitor service. A larger expenditure is necessary for administration, for records, and for clerical assistance. The greater number of laboratories has increased the cost for equipment and maintenance. A larger expenditure is required also for medical research, for the maintenance of library and museum, and for dispensaries and hospitals, unless satisfactory use can be made of city, State, or private institutions. The largest single item, however, is the expenditure for salaries paid to the essential expert teachers who devote their entire time to teaching and research in the laboratory departments. Salaries are now paid by several medical schools

¹ Carnegie Foundation for the Advancement of Teaching, Sixteenth An. Rept. (1921), p. 49.

also for full-time professors in the clinical departments, where heretofore these chairs were occupied by those engaged in practice, the prestige from teaching positions being frequently more valuable than the salaries. If clinical teachers are generally placed on a salary basis, the expense for instruction will be still further increased.

Where formerly medical schools could be maintained on students' fees alone, and frequently with a profit to the owners, now, with the extensive developments which were necessary to furnish a training in modern medicine, the cost is nearly three times greater than the sum obtained by students' fees.

Reports from 69 medical schools in regard to income and expenditures during 1920-21 show that the average income was \$130,672, including \$35,135 (26.9 per cent) obtained from students' fees, and \$95,537 from other sources.

The average expenditure by each college was \$123,947, including \$46,162 (37 per cent) for all-time teachers, \$21,131 (17 per cent) for part-time teachers, \$19,068 for wages, and \$36,974 for maintenance and supplies. The average yearly fee obtained from each student was \$185, and the average amount expended for each student was \$655. In 1916 the average fee paid by each student was \$150, and the average expended for each student was \$419. In the five years, therefore, the average expenditure per student increased 56 per cent, while the tuition fee increased 24 per cent.

3. DEMAND FOR TEACHERS IN THE FUNDAMENTAL SCIENCES.

In the campaign for the improvement of medical education, emphasis was laid on the need of expert teachers who would devote their entire time to teaching and research in the fundamental medical sciences. There were few graduates in medicine who had prepared themselves as specialists in teaching; so that many of these places were filled necessarily by graduates in arts and sciences who had no medical training. Others, however, had secured their doctorate in philosophy or other higher degrees and had majored in the medical sciences which they were teaching. Even with these nonmedical teachers, however, and as medical schools have continued to expand, the lack of those who are prepared to teach the preclinical branches has become more and more serious.

The shortage is due to several causes: (1) Few definite courses of instruction have been laid down whereby recent graduates in medicine or in arts can prepare themselves for teaching positions; (2) the present unsatisfactory arrangement of the medical curriculum does not give teachers of the medical science the recognition which they should have in the diagnosis and treatment of the sick; and (3) the

salaries are so small that recent graduates in medicine prefer to go into active practice.

The means of relief are now slowly being provided, as indicated by the following activities:

(a) A survey of graduate education both in the preclinical and clinical branches of medicine has just been completed, following which universities will be urged to establish courses of instruction for those who desire to take up teaching as a profession. When such courses have been established, students in medicine will soon know of them and can register for such courses immediately after graduation.

(b) A careful study of the medical curriculum is now being made looking to a reorganization whereby the teaching of the preclinical and the clinical branches may be brought in closer correlation.

(c) During the past few years particularly, salaries for teachers in the medical sciences have been considerably increased, and will doubtless continue to advance as professors in these sciences are given opportunity to demonstrate the value of their cooperation and advice in the actual treatment of patients. The salary problem has been aided indirectly in recent years by the tendency toward placing the chairs in the various clinical subjects, medicine, surgery, pediatrics, etc., on a full-time basis. To secure such teachers, it has been necessary to pay larger salaries than have heretofore been paid to teachers in the laboratory sciences—teachers who in many instances are doubtless as conscientious, faithful, and expert in their work as those occupying clinical chairs. This is helping toward a readjustment of the salaries of all teachers.

(d) To aid in relieving the shortage of laboratory teachers, the Rockefeller Foundation in June, 1922, gave \$1,000,000 to the National Research Council to establish fellowships by which students desiring to enter the teaching profession might secure the essential work in any high-grade university of their choice. At the present time, there are 26 such students taking courses in the universities in the United States.

The shortage of teachers can be further relieved by the establishing of fellowships by the graduate schools of a large number of universities having medical departments, similar to what has been done by the University of Minnesota and the University of Pennsylvania. While preparing himself for his chosen specialty, the fellow is required to do a certain amount of teaching and research. Those who show special ability as teachers can be retained on the teaching staff of the university or be recommended to positions in other medical schools having need of them. On satisfactory completion of the course of instruction, the graduate student in the Universities of Minnesota and Pennsylvania is granted a higher degree, such as the

master of science or doctor of philosophy, modified by the name of the subject in which he has majored.

Most of our leading universities already have the facilities for establishing such fellowships. They have their graduate schools which should naturally supervise all such courses. They are continually employing minor assistants in the teaching of the various fundamental medical sciences, and these positions could readily be converted into teaching fellowships similar to those established at Minnesota. The salary paid at present to a minor teaching assistant would pay the stipend for one or possibly two fellowships. In the clinical branches, likewise, the professors are even now taking into their offices recent graduates to aid them as assistants or as residents in hospitals to aid them in the care of their patients. These assistants might easily be included in courses for "fellows" or "teaching assistants" who would prepare themselves in the specialties. Such an arrangement would be to the advantage of the professors as well as of the students. Each prominent physician would have a constant source of supply of young physicians who would act as expert clinical clerks, second assistants, and finally first assistants in connection with the care of his patients in the hospital and in his office. Many recent graduates are now taking such work, but not in properly organized courses, and even though the student does extremely satisfactory work he gets no recognition in the way of an advanced degree. Herein lies a field the development of which has great possibilities for good.

4. SPECIALIZATION IN MEDICAL PRACTICE.

During the past 40 years more progress has been made in the field of medicine than in all previous centuries. Aside from the field of anatomy, medical knowledge formerly consisted largely of theories and deductions based on observations and clinical experience in the care of the sick. With the work of Pasteur, however, an era of medical investigation began which, within the next several years, definitely established the germ prigin of most of the common diseases. The definite knowledge of bacteria led in turn to methods of preventing infection, thereby making possible the marvelous developments in the field of surgery. Theory and guesswork gave way to demonstrable facts in the cause, cure, and prevention of disease; and the teaching and practice of medicine were revolutionized. Instead of a short two-year course of lectures, the medical school now gives instruction in eight or more laboratories, as well as in dispensaries and hospitals, covering four years of eight or nine months each. The curriculum has become more and more complex as the valuable methods of diagnosis, treatment, and prevention of diseases have been multiplied.

With this enlarged field of medical knowledge there has developed an increasing tendency for physicians to limit their practice to some one of the various specialities. This has been due, to a certain extent at least, to the evident overemphasis laid by the public in recent years on treatment by "specialists," whether or not they deserve that title. Whether, by so doing, the public obtains the best treatment may be questioned. Specialists, if properly trained, are of real service to the public, but unfortunately there are some who pose as specialists but who lack the basic training and skill which that title should indicate. In order to develop a high degree of knowledge and skill in one specialty the physician must necessarily neglect the other portions of the field of general medicine. Unless, therefore, he has developed a skill in recognizing all types of disease before he begins to specialize, he is not likely to obtain it at all. Preferably, the physician should select a specialty only after he has had the experience of several years as a general practitioner.

There is a legitimate field for specialists, but the need should not be exaggerated. Physicians of high reputation state that from 80 to 90 per cent of all cases of illness can be best cared for by well-trained general practitioners. The great majority of physicians can best serve the public by remaining in general practice. Those who have graduated during the last several years have secured a training in the latest and best methods of both diagnosis and treatment. Furthermore, the fact that they are seeing and studying all types of illness places them in position not only to care for the very large proportion of patients who come to them but also to recognize in the exceptional patient the need of treatment by a specialist.

5. REVISION OF THE MEDICAL CURRICULUM.

The medical curriculum has always been a subject for discussion at educational conferences, and changes of greater or less consequence are frequently made. With the rapid expansion of medical knowledge and the consequent enlargement of the curriculum, an unsatisfactory situation has developed whereby the laboratory subjects (anatomy, physiology, biochemistry, etc.) are taught in the first two years separately from the clinical subjects (medicine, surgery, ophthalmology, etc.), which are taught in the last two years of the medical course. As a consequence, the student on entering the third year considers that he has "finished" the work in the laboratory sciences and in many instances proceeds to forget, even if he has ever learned, the essential facts of those sciences and their relation to the clinical subjects. There is at present a general demand for a reorganization of the curriculum whereby the laboratory and clinical subjects will be taught more nearly parallel, in order

that a closer correlation of the two groups of subjects may be obtained.

Various steps have been taken to secure such correlation. An important example is the establishing of clinical-pathological conferences, through which the departments of internal medicine and pathology are cooperating to establish a better understanding of the pathological conditions which underlie the various symptoms in the living patients. Correlation between pathology and surgery has been provided in the course of surgical pathology, and cooperation between internal medicine and the departments of chemistry and physiology is provided in the study, respectively, of metabolism and in the use of the cardiograph. A close relationship exists in some medical schools, also, between the departments of internal medicine and of pharmacology and therapeutics. These measures, however, are only a beginning, but indicate the value of a more extensive cooperation between laboratories and clinical subjects.

One of the chief difficulties in securing this cooperation is that the laboratory departments are in a separate building from the clinical departments, and in some schools the laboratory and clinical departments are several miles apart or even in different cities. There are also some medical schools teaching only the laboratory subjects, no facilities being available for the teaching of the clinical subjects.

The needed revision in the medical curriculum, therefore, means, first of all, a complete plant which not only should include laboratory and clinical subjects but also should be on the university campus in close proximity to the premedical sciences, physics, chemistry, and biology. This will be important particularly in the needed development of graduate medical courses, which should be under the direct supervision of the graduate school of the university.

To establish a closer physical contact of the laboratory with the clinical departments, some medical schools are already erecting buildings for laboratory departments as wings or parts of their hospital buildings; and at the present time plans for several new hospitals, notably that of Vanderbilt University at Nashville, include in the same building wings for the laboratory departments connecting immediately with hospital wards. Such an arrangement will help to solve some of the most acute problems in medical education. Hereafter, instead of being isolated in their respective departments, the professors of the laboratory subjects should be in the hospital and will function as members of the hospital staff. Such an arrangement can not fail to secure for the clinician a better knowledge of the laboratory sciences, but also the professors of the laboratory branches will obtain a broader knowledge of conditions underlying diseases. Hereafter the medical student from the beginning will be in intimate

contact with the patients, where the knowledge he obtains of the laboratory subjects will be correlated with the instruction he is receiving in regard to the diagnosis, treatment, and prevention of disease. Both normal and abnormal conditions will be better understood because they are brought into direct contrast. This closer relationship in the teaching of laboratory and clinical subjects, therefore, can not help but provide in the future for a better and more intelligent care of the sick.

6. MIGRATION OF PHYSICIANS FROM RURAL COMMUNITIES TO CITIES.

Physicians are following the general trend of population toward the cities, but in a larger proportion. Statistics show that 47.1 per cent of the population of the United States is now contained in cities of 5,000 and over, while 63 per cent of all physicians are located in those cities.

TABLE 3.—*Urban or rural population and supply of physicians.*

Population of cities, ¹	Number of cities.	Total population.	Per cent population.	Number of physicians. ²	Ratio of physicians to population.	Percentage all physicians.
500,000 and above.....	12	16,369,310	15.5	30,932	529	21.0
200,000 to 500,000.....	21	6,353,645	6.1	12,862	493	9.0
50,000 to 200,000.....	111	9,973,462	9.4	17,254	578	12.0
10,000 to 50,000.....	662	12,017,783	11.4	21,204	563	15.0
5,000 to 10,000.....	721	4,997,794	4.7	9,313	527	6.0
Below 5,000.....		56,153,587	52.9	94,043	1,020	37.0
Total.....		105,708,771	100.0	115,608	726	100.0
Total in cities of 5,000 and over.....			47.1	91,565		

¹ Population figures based on report of the Census Bureau for 1920.

² Figures regarding the numbers of physicians are from the American Medical Directory for 1921.

The scarcity of doctors in rural communities is not due to an inadequate supply of physicians, since the shortage in rural communities is more than offset by the oversupply in the cities. There is no need, therefore, for special methods to swell the ranks of the medical profession. As already shown in this article, also, the numbers of medical students, even under the higher entrance requirements, are so large as to make it difficult for medical schools to provide for them.

The reasons for the shortage of physicians in rural communities are outlined as follows:

(a) Many doctors in rural communities graduated when standards of medical education were low, and before medical schools had undergone the tremendous developments which have taken place during the past 15 or 20 years. Although some of these have kept in touch with the progress in medical knowledge, there are many who for financial or other reasons could not get away to secure a postgraduate education.

(b) The recent graduate in medicine with his improved training naturally prefers to live in the city with its better social, educational, and living conditions, also—

(c) The trend in recent years for the treatment of patients in hospitals has been rapid, especially where surgical procedures are required, and—

(d) Hospitals are built only in cities, in centers where the population is sufficiently large to insure their support.

(e) For the reasons specified, people in rural districts who are able to pay fees go to the near-by cities to doctors who have established reputations and where they can secure hospital care.

(f) This leaves for the country doctor only emergency cases and patients who are unable to, or do not, pay reasonably high fees.

(g) This situation has become worse as the automobile, country roads, and other transportation facilities have been improved.

(h) While there always has been a scarcity of physicians in rural districts, the situation became more acute when the war furnished the opportunity for many physicians to get away from the country districts. Then, at the close of the war, they obtained postgraduate work and sought more favorable locations. Meanwhile, investigation of many rural districts from which requests for physicians have come shows that in most of them physicians could not make a livelihood without undue sacrifice and difficulty.

It is suggested that in any community needing a physician, a number of individuals pledge themselves to guarantee an income of from \$2,500 to \$3,000 a year, and to interest the community in a physician's support. This plan was tried in a community in the Middle West, where 25 citizens are said to have pledged \$100 each—\$2,500 per year—as a guaranty, the contract covering a period of five years. A report states that the physician selected has been obtaining an average of \$300 per month, that his five-year period is nearly up, and that he already has enough signers to guarantee his stay for another five years.

Such a plan has two strong points in its favor: (a) The people of the community have a voice in the selection of their physician, and (b) the fact that they have pledged themselves to his support will induce them to patronize him so far as is possible, and not go to physicians in distant cities.

With the establishing of such guaranties, it is believed that a well-trained physician can be obtained by any community where there are enough people to support one. The majority of physicians are short of funds at the time they complete their medical training, and will be attracted to places where some income, however small, is guaranteed. Such opportunities are available mostly in cities.

Reasonable guaranties, therefore, from rural districts will be attractive to recent graduates and help to bring about a wider distribution of them.

III. ESSENTIAL EDUCATION FOR ALL WHO ARE TO TREAT THE SICK.

As already shown in this report, the field of medical knowledge has been greatly increased during the past 50 years, making necessary a more extended and complex medical curriculum, which, in turn, requires laboratories, library, museum, and other equipment such as is possessed by all our recognized colleges. Essential, also, are a large hospital and an out-patient department where the students are instructed at the bedside in the diagnosis and treatment of diseases.

Before he can independently assume the right to care for sick or injured people the physician at the present day, after graduation from the high school, must secure the following education:

- (a) Two or more years' work in a recognized college or university.
- (b) Four years of eight or nine months each in an acceptable medical school.
- (c) One or more years spent as a resident physician or intern in an approved hospital.

If, instead of entering general practice, he wishes to specialize in some narrower line, such as surgery, children's diseases, eye, ear, nose, and throat, etc., he should also take—

- (d) Two or three years of review courses and higher apprentice work with some physician who has already attained proficiency in the chosen specialty.

Reference has already been made to the expense of conducting a modern medical school, which amounts to about three times what the school obtains in fees from its students. As a consequence the modern medical school has to have an additional income, either from State appropriations or private endowment.

CONFUSION IN MEDICAL LICENSURE.

Along with the great improvements in medical schools and the increases in their entrance requirements there has been—and properly—a corresponding advance in the educational qualifications required of physicians by State medical licensing boards. While the medical practice laws have been established to safeguard the public against incompetent or untrained physicians, much confusion has been caused by the passing of laws which have the effect of nullifying the practice acts, in that others are enabled to secure licenses to treat the sick without having to possess the educational qualifications fixed by the medical practice act.

At the present time, instead of one law and one board in each State to enforce its provisions, there are, in the 48 States, 96 separate

and independent boards, some States having as many as five or six different boards, created by as many independent practice acts outlining as many differing standards of educational qualifications. One can readily believe that in such confusion the public interests have been largely disregarded.

This confusion is due to a lack of understanding on the part of the public and of State legislators as to what constitutes the practice of medicine, or possibly better termed, the practice of the healing art. The fixing of minimum essential educational qualifications for physicians can not serve as a protection of the public unless the standard fixed is applied equally to everyone else who is granted a license to care for sick people as a profession.

Besides the regular, or "orthodox," medical schools there have always been also the unorthodox or sectarian "schools" which later, as the scientific basis of medicine has been established, have become extinct or have dropped their sectarian character. Some of the "schools" referred to—such as homeopathy, eclecticism, and physio-medicalism—have had little or no serious consequences, since they made no claims of being other than "medical" schools; their teachers were physicians, their educational standards were the same as for "regular" medical schools, and they were subject to the same or similar medical practice laws. The chief differences were of opinion in regard to the action or character of certain drugs or remedies used. Heretofore, indeed, there has been ample room for such differences of opinion. Prior to the researches of Pasteur, medical knowledge consisted largely of a collection of treatises and theories based on clinical observations; and because of the lack of scientific procedures, one physician's theory was believed to be as worthy of consideration as another's.

But there are other sectarian "schools" besides those already alluded to whose teachers, as a rule, are not physicians, nor have they obtained a medical training; their educational standards are decidedly inferior to those of medical schools, and they have not been made subject to medical practice laws.

The experimental research work carried on since 1870 by Pasteur, Koch, Klebs, Neisser, Kitasato, Flexner, and others has resulted in indisputable proof that most of the common diseases afflicting mankind are due to specific bacteria or germs. Theories and guesswork in the field of medicine, therefore, have been replaced by scientific facts and procedures—facts which are the basis of the medical teaching in all our university medical schools. It is entirely reasonable at the present time, therefore, that, in the interest of the public, a minimum standard of educational qualifications, recognizing these advances in medical knowledge, should be established for everyone who

is to be authorized to treat the sick. If laws regulating the practice of the healing art are at all necessary, then they should (a) insist on the minimum educational qualifications which are essential properly to train one in the art of healing and (b) provide for one board of well-qualified members to enforce the law in each State. The license issued in any State should be a guaranty to the public that its holder is qualified to assume the responsibility for the care of sick human beings.

This is an educational problem and can be solved only as approached from that point of view. The danger from these groups of practitioners is to the public, through the confusion they are causing—at least temporarily—in educational and public health laws. Should not the standards of professional training in our State universities apply to all who practice any particular profession? Granting that there is good in some cases in the methods of treatment advocated by these "schools," that good would in no way be diminished if those who practice them were required to have a reasonable preliminary education and some knowledge, at least, of the fundamental medical sciences. It might not be amiss also, if he should learn of some of the great victories of modern medicine in ridding the world of most of its epidemic diseases.

A FEW VICTORIES OF SCIENTIFIC MEDICINE.

(a) The discovery of the germ origin of disease has led to the practical extinction of many diseases, including such death-dealing epidemics as Asiatic cholera, bubonic plague, and diphtheria.

(b) The discovery of the diphtheria bacillus led to the knowledge of how to assist nature in curing the disease through the use of diphtheria antitoxin artificially manufactured. This has greatly reduced the mortality of the occasional cases of this disease.

(c) Typhoid fever has been conquered by the discovery of the typhoid vaccine. This disease, which raised such havoc among the armies in preceding wars, was so scarce during the World War as to make it an almost negligible factor among the causes of death.

(d) The discovery that the germ of yellow fever was transmitted through the bite of a mosquito has led almost to the extermination of that disease; has changed localities in the South and in Central America from pestholes of diseases to places of safe human habitation and, incidentally, permitted the completion of the Panama Canal.

These are but a few of the many victories which could be described. And the scientific basis of medicine is still being gradually enlarged. Recently there have been two other noteworthy achievements. One is the discovery of insulin, and the method by which it can be extracted from the pancreas. Careful tests have shown it to be of

special value in the treatment of diabetes. The other is the method of isolating the germ of influenza, which, it is hoped, may lead to a more serviceable knowledge of that disease.

OUTLOOK FOR AN IMPROVED MEDICAL EDUCATION.

That our universities still have faith in the science of medicine is evidenced by the great wave of reconstruction of medical college plants. Many improvements have already been made in this respect in the past 15 years. Great constructive programs are now being carried out, or have been quite definitely planned, for the medical schools of the following universities:

Colorado.	Indiana.	Rochester.
Yale.	Iowa.	Cincinnati.
Emory.	Johns Hopkins.	Western Reserve.
Chicago.	Minnesota.	Oregon.
Harvard.	St. Louis.	Vanderbilt.
Illinois.	Washington.	Wisconsin.
Northwestern.	Nebraska.	

When the whole picture is viewed, the developments in the knowledge of medicine and the methods and facilities for medical teaching and practice have been no less remarkable—although perhaps less sensational or spectacular—than the developments of the automobile, the airplane, the movies, wireless telegraphy, and radiotelephony.

CHAPTER XI.

AGRICULTURAL EDUCATION.

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CONTENTS.—Agriculture in secondary schools—Types of schools and classes—Development of curricula—State supervision—Growth of teacher-training facilities—Relationships between agricultural education agencies—Agricultural education at meetings.

AGRICULTURE IN SECONDARY SCHOOLS.

Data are not available that will give more than a partial idea of the extent to which work in agriculture is a part of the program of secondary education in this country. The 1922 report of the Federal Board for Vocational Education contains the most complete information available regarding instruction in vocational agriculture. Vocational agriculture as used in the Federal board's report refers to the instruction that presumably met the standards set up by State boards for vocational education under the provisions of the Federal vocational education act. Due to the fact that there are practically no objective standards by which the vocational effectiveness of this instruction may be measured, there are undoubtedly many schools not included in the report of the Federal board in which the instruction functions quite as effectively in vocational ways as does that of many schools which are included. In spite of this defect, the data contained in the report give a fairly complete idea of the present magnitude of instruction in vocational agriculture and the rate at which it has developed in recent years.

Year.	Schools.	Teachers.	Pupls.
1918.....	609	995	15,453
1919.....	813	1,201	19,933
1920.....	1,375	1,570	31,301
1921.....	1,722	2,071	43,352
1922.....	2,175	2,280	60,236

The report prepared by A. C. Monahan and C. H. Lane, for the 1916 report of the United States Commissioner of Education, contains the following summary of the status of agricultural teaching, based on as complete information as the Bureau of Education was able to obtain at that time:¹

Number of public high schools reporting teaching agriculture.....	2,175
Established before 1901.....	19
Established from 1901 to 1905.....	33
Established from 1906 to 1910.....	413
Established since 1910.....	1,710

¹ Rep. of Commis. of Educ., 1916, vol. 1, p. 237.

Reporting teaching agriculture primarily—	
As informational subject.....	1,521
As vocational subject.....	566
Number of persons teaching agriculture:	
Male.....	2,007
Female.....	217
Number of these with any special training in agriculture, including those with full 4-year agricultural college courses, short-term courses, normal school agricultural courses, Summer courses, etc.....	11,021
Number of students of secondary grade studying agriculture:	
Boys.....	24,753
Girls.....	16,312
Number of schools using school land for instructional purposes.....	392
Number teaching through home-project method.....	337
Number in which instruction consists wholly of classroom work.....	416
Number in which instruction consists of classroom work, with laboratory exercises and observation on neighboring farms.....	1,064

The data from the report of the Federal board and the Commissioner of Education's report are not directly comparable. In case of the latter nearly three-fourths of the schools reporting indicate that their instruction is considered to be on an "informational" rather than on a "vocational" basis. Of the 566 high schools stating that their work was on a vocational basis it is doubtful if a majority of them would have conformed to the standards that have been set up by the States under the provisions of the Federal vocational education act. This does not imply that there were no outcomes of vocational value. In fact, there has undoubtedly been a large amount of dissemination of vocationally useful information as a result of the teaching of agriculture as an informational subject. The fact that these data show that 40 per cent of the students studying agriculture in 1916 were girls and in 1922 only 13 per cent were girls indicates that students are being reached under the provisions of the Federal vocational education act that are more likely to use this instruction than was formerly the case.

Information is not at hand by which it is possible to determine the effect of this rather large development in recent years of vocational instruction in agriculture on the more general instruction in this field. There has probably been some decline in enrollment in these phases, although it is possible that the entrance of approximately 60,236 students in vocational agriculture has not brought this result. It may have been offset by an extension of instruction to a larger number of schools and to the marked increase in high-school enrollment in recent years.

In recent years there has been a tendency to get the instruction in agriculture in the elementary schools on a more definite basis. This has been accomplished largely by the extension into the elementary schools of the home-project method that has been so successfully used in teaching vocational agriculture. In some States there has been developed a closer coordination of the relationships between this phase of agricultural instruction and boys' and girls' club work. This progress has not been generally marked and seems unlikely to be as long as those administratively responsible for boys'

¹ Or 45 per cent.

and girls' club work take the point of view given in the last report of the States Relations Service. C. B. Smith, chief of the office of extension work, makes the following statement in the 1922 report bearing on this subject:²

That the most improved phases of farm and home practices can be demonstrated by boys and girls is quite generally recognized. In fact, extension workers are realizing that many farm and home practices can best be demonstrated through boys and girls, and the latter will, no doubt, play an increasingly important part in the prosecution of the extension program of the future.

In contrast with this viewpoint of boys' and girls' club work is that of Dr. L. H. Bailey, which was given in the report of the Commissioner of Education for 1916:

The fundamental consideration is that all this kind of work is educational. It is not primarily agricultural work, not undertaken directly to improve the farming of a region. The primary consideration is its effect on the child. If we can not accept these propositions, then I should be in favor of giving up the boys' and girls' contests.

It is legitimate to use domestic animals and crops for the primary purpose of improving and advertising the agriculture of a region, but we must not use children this way. Animals and crops are agricultural products; children are not agricultural products.

If these positions are granted, we shall agree that this contest work between children must be put more and more into the hands of those who are trained in education and who carry the responsibility before the public for educational effort. I think that this kind of work should be a part of the public-school system. On their own account schools must take up this and similar work if they are to secure the best results for themselves and to cover their own fields. The organizing of laboratory work at home under the direction of the teacher is one of the most important means of tying the schools and the homes together and making the school a real part and parcel of the community.

When this time shall come the work with crops and domestic animals and home practices will be a regular part of the school day, incorporated inseparably with the program of education. We must hope for the time when there shall be no necessity for the separate organization of such clubs, the school having reached and stimulated the situation on every farm and in every home. It is sometimes said that the agricultural agents organize the contest work better than the teachers. Perhaps, but the work is essentially school work, nevertheless, and we should now be looking for results in the long future.³

TYPES OF SCHOOLS AND CLASSES.

Under the provisions of the Federal vocational education act there are three principal types of organization through which the instruction in vocational agriculture has been developed. They are all-day schools, short course or part-time courses, and evening classes.

All-day schools.—This type of instruction constitutes most of the work that is done under the provisions of the Federal vocational education act. Of 2,174 agricultural schools reported by the Federal board for 1922, 1,937 were day schools, and they enrolled 52,961 of the 60,236 pupils that were reported.

² Report of the Director of States Relations Service, 1922, p. 36.

³ Rep. of Commis. of Educ., 1916, pp. 241, 242.

These schools are in the main departments that have been developed in the high schools, although there are some special schools of agriculture of the State, district, or county type. The pupils in the agriculture departments devote from 90 to 180 minutes per day to the work in agriculture and the remainder of their time is spent in pursuing academic subjects of the high-school program of studies. Since the typical high-school curriculum is college preparatory, the curriculum in vocational agriculture is usually a hybrid that results from introducing some instruction in agriculture into the traditional high-school curriculum. It usually supplements a foreign language. Undoubtedly there will be evolved in time a curriculum that will meet adequately the needs of those who through necessity or desire enter upon their life work immediately on leaving high school.

In addition to the school instruction there must be, under the provisions of the Federal vocational education act, at least six months of directed or supervised practice in agriculture. In most States this takes on the form of "home-project" work. This type of instruction was developed in Massachusetts by R. W. Stimson; and with more or less modification has been quite generally accepted as the most effective type of vocational instruction for youth from 14 to 18 years of age who are attending high school and at the same time maintaining close contact with the home farm. During the past two or three years there has been a growing recognition of the importance of making provision for certain types of practical work that are not readily taken care of under the typical home-project method of instruction. Numerous efforts are being made to organize such instruction on a basis that shall supplement the practical work of the home project. There remains much, however, to be done in the way of analysis of the needed skills and the determination of standards of performance for different types of farming before supervised practical work can be regarded as adequately developed.

In the typical high-school department of agriculture there is one teacher devoting all or most of his time to instruction in this subject. He is employed by the calendar instead of the academic year and devotes the school vacation to supervision of the practical work of his pupils. In some States modifications of this plan have been made in order to reach larger numbers of pupils with the instruction than would be possible under the typical conditions. These modifications usually consist of some kind of a circuit in which one teacher is responsible for the instruction in from two to five or six schools. The length of time that he spends at a school varies with the number of schools in the circuit. In case of the larger groups of schools instruction in vocational agriculture may not come more frequently than once a week. Pennsylvania, South Carolina, and New Mexico have given attention to this type of instruction. The plan apparently had its origin in South Carolina in 1914.

As previously stated, there are besides the departments of agriculture in the high schools a relatively small number of separate or special schools of agriculture. There has been practically no development of this type of school in the past two or three years. This is no doubt due to the fact that attention has been centered chiefly on the development of high-school departments. Eventually the special school may be better adjusted to the program of secondary vocational agricultural instruction than is generally the case at present. Some of the States having such schools are Massachusetts, Wisconsin, Oklahoma, New York, and Vermont. The curricula in them are from two to four years in length and the school year six or more months. In general, their curricula and courses of study are of a more "practical" character than those of the high schools, and they reach a group of students that are older than those found in high-school departments.

The 1921 report of the Federal Board for Vocational Education contains the following statement regarding the place of the day school in the program of vocational instruction in agriculture:

Advance in the number of day schools and in the quality and standards of the work given in them, while gratifying, is not always the best evidence that a State is meeting its vocational agricultural educational needs. It is generally recognized that day schools should be generally established only after educational and agricultural surveys have disclosed definite opportunities for agricultural preparatory training on a full-day program, and have shown that this particular kind of vocational agricultural training is superior to other forms of agricultural training that might be established in the community.⁴

Part-time classes.—The part-time or short-course work is designed to meet the needs of boys who are engaged in farm work but are not in position to avail themselves of the regular high-school program of vocational agriculture. Instruction of this nature is usually offered during the dull season, and the courses vary in length from 2 or 3 three weeks to 18 or 20 weeks.

The enrollments in the various types of work in agriculture were not segregated in the reports of the Federal Board for Vocational Education previous to 1921, so that data are not available for earlier years. There was, however, relatively little of the short-course work previous to that time. The report for 1922 gives the following data on the part-time work in agriculture:

Year.	Schools.	Enrollment.	Percentage part-time enrollment is of all-day enrollment.
1921.....	82	1,450	3.3
1922.....	188	5,942	11.2

⁴ Report of the Federal Board for Vocational Education, 1921, pp. 55, 56.

In 1922 the enrollment in all-day schools increased 29.9 per cent over that of the preceding year, while in the same interval the growth in short-course or part-time work increased 309.8 per cent. This work has not generally received the attention its importance warrants. There is large opportunity and great need for further expansion of it.

Fortunately there are some facts available on this aspect of vocational education in agriculture:

The vocational bureau of the New York State Military Training Commission obtained data on most of the 16, 17, and 18 year old boys employed on farms in New York State during the year 1918. There were approximately 15,000 in the group and the median boy had completed 7.8 grades before leaving school. Without doubt most of the boys in this group either through choice or by force of circumstances, will become farmers. They do not have the minimum training that is required for admission to the work in vocational agriculture, so that in New York State, as in most others, they are cut off from an opportunity for instruction in that field.

In 1918, there were 1,011 boys studying vocational agriculture in the State of New York. The same year a study made by the vocational bureau of the military training commission revealed the fact that there were approximately fifteen thousand 16, 17, and 18 year old boys employed on farms in the State. None of these boys were attending school. Only 1 in every 7 of the boys of this age was in school. According to the last annual report of the Federal Board for Vocational Education, the number of boys pursuing the work in agriculture in New York State had increased to 1,829 and, in all probability, there was not much change in the number of boys of the ages indicated, living on farms.

A further statement of facts may assist in making evident the extent to which the present program of vocational education in agriculture falls short, even under the most favorable of conditions. In Chautauque County there are nine departments of vocational agriculture and a tenth is located near the boundary line and draws most of its pupils from Chautauque County. In all probability there is not another county of equal area in the United States that has as many departments of vocational agriculture. These departments are, in the main, well located with reference to one another. At present there are 189 pupils enrolled in vocational agriculture in that county. The study made by the military training commission in the year 1918 showed that there were 389 boys 16, 17, and 18 years old employed on the farms in the county and not attending school. Seventy-nine and five-tenths per cent of these boys were on their home farms. Nothing was available for these boys in agricultural education.

A further analysis of the conditions in Chautauque County reveals another weakness. Of the 389 boys 16, 17, and 18 years old living on farms, only 78 had stayed in school long enough to qualify for high-school entrance. Yet the instruction in vocational agriculture in that county was limited to such boys as were in position at least to enter upon a 4-year high-school program. It is folly for us to delude ourselves with the idea that we are meeting the problem of vocational education in agriculture in any adequate fashion, as long as its opportunities are limited to those who enter high school. Apparently this delusion is general. According to the report of the Federal Board for Vocational Education, there were in 1921, 40,343 pupils enrolled in day schools which are almost exclusively high-school departments. In contrast there were 1,927 enrolled in short courses and 439 in evening classes, approximately in ratio of 20 to 1. Contrast these figures with those of the New York Military Training Commission that found in

its study that 1 in 7 of the 16 to 18 year old group of boys was to be found in school and that less than half were prepared to enter high school.⁵

The needs of this group are met differently by the various States. There has been during the past year a marked development of short-course instruction in connection with the work of the existing high-school departments of agriculture. Under this plan the teacher of vocational agriculture makes provision for handling one or more groups of boys for periods of varying length in addition to those who are pursuing the regular curriculum in agriculture in the high school. In most cases these groups come to the high schools, but in some instances arrangements are made for giving the instruction at some other center that is more convenient for the group to meet. The reports of the Federal Board for Vocational Education indicate that the States leading in the development of short courses in connection with the high school are Arkansas, Florida, New Jersey, North Carolina, New York, and Ohio.

In Iowa a definite county organization has been established for the purpose of meeting the needs of the short-course group. Under this plan a county organizer is attached to the office of the county superintendent of schools. This organizer is employed on a 12 months' basis. After a study of local conditions he determines on several centers in the county in which it seems desirable to offer short courses. Pupils are enrolled, and teachers are secured by the organizer. These teachers are brought together by the State authorities and given a week's instruction preparatory to undertaking their teaching. Each organizer is responsible for the instruction at one center, and following the closing of the short courses he takes responsibility for following the supervised practical work of the pupils who were enrolled in all the centers in the county. This activity, with the making of plans for short courses for the ensuing year, occupies his time during the months when instruction is not in progress. The short courses run for about 12 weeks.

Minnesota has apparently been fairly successful in reaching this group of farm boys by developing courses of 24 weeks in length in connection with the existing high-school centers. The program of studies is not limited to agriculture, but includes subjects that are designed to give the prospective farmer a broader outlook on life. The reports show that the pupils reached were, in general, considerably older than those found in the regular departments of vocational agriculture.

The last year or two has witnessed a general awakening on the part of those interested in the development of instruction in voca-

⁵ G. A. Works in Vocational Education Magazine, September, 1922; pp. 9-10.

tional agriculture to the importance of short-course instruction, and it may be expected that there will be a relatively large development of this work as contrasted with the work of the all-day school.

Evening classes.—The work in these classes is usually designed for adult farmers. Under the provisions of the Federal act persons 16 or over may be admitted. The report of the Federal board for 1922 gives the following data regarding this type of instruction:

Year.	Number of schools.	Enrollment.
1921.....	50	1,333
1922.....	50	1,139

The fact that both evening and short-course instruction reaches a considerable number of adult farmers raises a problem of relationship with the extension work that is being done by the land-grant colleges under the provisions of the Smith-Lever law:

This law was in operation several years prior to the passage of the Federal vocational act, and it is very unlikely that Congress intended to provide for a duplication of service provided for by the former when it passed the latter. In fact, it is a reasonable certainty that it was regarded as a supplementary measure. It will be unfortunate for both activities if there is a considerable growth in this duplication, thus resulting in the extension service of the land-grant colleges and State boards for vocational education working at cross purposes.

Undoubtedly there are instances in which the State and local authorities interested in vocational education in agriculture are justified in endeavoring to reach the adult farmer. Wherever they undertake work with this group there should be consideration of the following:

1. Work with adult farmers should be a secondary consideration as contrasted with meeting the needs of employed farm boys from 16 to 24 years of age. Throughout the country this group is much greater in number than is the group to be found enrolled in high-school courses in agriculture, and, as a whole, relatively little has been done toward meeting its needs for vocational education in agriculture. They are an important group to reach, because there can be but little doubt that a large percentage of them will become farmers and they are at an age when they have the time for courses of a fair degree of length and intensity. It is true that they are a difficult group to reach, largely due to the fact that they are "school sick," but the success that many teachers are having shows that it is possible to interest them.

2. When work is undertaken with adult farmers, it should be under the administrative direction of the State and local extension authorities. The instruction should be in accord with the plans of these agencies. It is extremely unfortunate that, in some instances, State authorities for vocational education are encouraging teachers of agriculture to undertake essentially the same or very similar work with adult farmers to that which is done by the extension service of the land-grant colleges, without any effort at coordination. In some cases an even more serious blunder is made, as when a State board for vocational education undertakes the employment of specialists in technical agriculture to conduct extension activities with adult farmers. The experience that State departments of agriculture have had in conducting educational work should be ample evidence of the dangers of such a policy.⁶

⁶ G. A. Works in *Vocational Education Magazine*, November, 1922, pp. 177, 178.

DEVELOPMENT OF CURRICULA.

There can be but little question regarding the stimulating influence of the provisions of the Federal vocational education act on the development of instruction in vocational agriculture in secondary schools. There are, however, many problems to be solved before the work can be considered on an adequate basis. One of these in which some progress is being made, but which is still far from solution, is the curriculum. Reference has been made to its hybrid character. Its more adequate development will, undoubtedly, be in a large measure contingent upon the development of curricula in high schools that are better adapted than those of the present to the needs of the rapidly growing pupil population of these schools. The work in vocational agriculture is rather generally to be found in the rural high schools, which are usually relatively small. The small schools have not made so much progress as the larger schools in inclusion of other than the traditional subjects of instruction in their educational offering, and hence are more backward in securing complete adaptations of the curriculum in agriculture.

There still remains much to be done in adjusting the course of study in agriculture to the agricultural demands of the regions in which the schools are located and to the needs of different groups of students. As has been stated, the development of the secondary instruction in vocational agriculture has been largely in connection with the existing high schools. Since the usual high-school curriculum is four years in length, the course of study in agriculture has been of the same length. This is the situation regardless of the fact that, in many instances, the character of the agriculture of the regions in which the schools are located does not demand a course of that duration. In other instances the students with genuine vocational interests have left largely before the end of the high-school period.

The courses that are offered are still determined largely by textbooks, preparation of teachers, bulletins, and general outlines that are prepared for state-wide use. Needs of pupils, demands of farming, and rural citizenship do not receive adequate consideration. Progress is being made in the study of local farming enterprises and the development on the basis of these studies of courses that are more likely to function in the vocational career of the students than are the more formal courses based on texts and general outlines.

Factors contributing to improvement of courses of study.—The means that have contributed to this end are:

1. The more adequate development of the home project. This growth has involved the gradual recognition of the pupil's enterprise on the home farm as the core of the instruction. There is also a growing recognition of the importance of so selecting the home proj-

ects that they shall be representative of important farm enterprises of the community.

2. The use of the farm survey as a means of instruction. This method results in making students aware of the existence of problems in the farming of a community and the means that are being used by farmers in meeting them. It furnishes a definite motive for the use of books and bulletins and is likely to result in more intelligent study on the part of the pupil.

3. More recent than the project and the survey is the job analysis that has received consideration during the past year or two. While its use will undoubtedly make an important contribution to the more effective teaching of vocational agriculture, it still is in the experimental stage.

These means of making more effective the instruction in vocational agriculture have received much consideration by the leaders in this field of education during the past two or three years, but they have not yet affected in any large way the instructional work of the rank and file of teachers.

STATE SUPERVISION.

One of the most marked developments in the past few years has been in the growth of State supervision of the instruction in agriculture. Previous to the passage of the Federal vocational education act there were only five States that had provided specially prepared supervisors, although there were 39 States giving aid for instruction in agriculture. The report for the Federal board for 1922 shows that practically all the States were then employing a full-time supervisor and the remainder had the services of part-time supervisors. There were engaged in the work 42 full-time and 27 part-time supervisors. Most of these persons had more or less of special preparation for their work. Thus the tendency has been to develop the supervisory staff on a State basis. In the majority of the States the question of the wisdom of this organization will have to be faced. For most States it seems desirable for the State board for vocational education to look forward to the time when it will limit its activities primarily to inspection and to stimulating the development of relatively local agencies to carry the supervisory responsibilities.

GROWTH OF TEACHER-TRAINING FACILITIES.

Even more marked than the development of the supervisory agencies has been the growth of facilities for the training of teachers of vocational agriculture. In every State the land-grant colleges, or these institutions in cooperation with State colleges of education, have been designated by the State boards for vocational education as the agencies to train teachers of agriculture. The growth during the

five years that have elapsed since the passage of the Federal vocational education act is shown by the following figures from the report of the Federal Board for Vocational Education for 1922:

Year.	Teachers employed in training.	Students in training.
1918.....		
1919.....	116	1,534
1920.....	222	1,334
1921.....	293	2,310
1922.....	285	3,470
	253	4,112

Most of the instructors are engaged in offering professional instruction to prospective teachers, although in some institutions the Federal funds have been used to develop technical courses in agriculture that were especially needed by teachers of vocational agriculture.

The work of the teacher-training departments is not limited to the instruction of students in residence. In many States provisions have been made by which improvement of teachers in service is conducted.

The strengthening of the instruction in vocational agriculture is largely dependent on the development of strong teacher-training resources. The organization of the more formal phases of this work was relatively easy as contrasted with the development of facilities for providing supervised teaching experience for those in training as teachers. In giving opportunity for such experience to prospective teachers of agriculture there are several difficult questions that do not have to be met in preparing teachers of the academic subjects. In case of the latter the provision of a training school associated with the college or department of education is usually adequate. In the instance of agriculture it is necessary to have a group of pupils in the training school that is vocationally inclined toward farming. Many of the land-grant colleges are not so located that it is possible to have such pupils. Even when they are available it is not in such numbers that an adequate amount of supervised teaching experience can be given the prospective teachers. It is highly desirable that in this period of pre-service training the students should have the experience of supervising the home projects of the pupils and guide them in conducting farm surveys. These call for a setting on the part of the training school that is pronouncedly rural. In meeting this situation different training institutions have worked out plans adapted to local conditions. In some instances during the period of pre-service training the candidate is placed in a department of vocational agriculture as an assistant or "apprentice" working under the guidance of the regular teacher and under the general supervision of the staff of the teacher-training departments. The length of these periods of service vary from a few weeks to as much as a semester.

Usually students receive collegiate credit for this work. In other instances the training institutions have one or more training departments of vocational agriculture associated with them. These departments are so located that the students in training do not have to drop their other collegiate work. They usually spend a half day in gaining teaching experience under supervision and the rest of their time is devoted to the other phases of their college work.

The devices vary for different situations, but they all have a fundamental conception of the importance of providing an opportunity for supervised teaching experience under conditions that approximate those that are likely to obtain in the schools in which the teachers will later render their service. The difficulty of providing adequate experience has undoubtedly been a factor in stimulating the development of the itinerant teacher-training work. It is an attempt to remedy the weaknesses of the pre-service training by a program of in-service training. The teacher-training departments have made marked progress in strengthening both of these phases of their programs during the past year or two. There is, however, general recognition of the fact that the work is not yet on a satisfactory basis.

RELATIONSHIPS BETWEEN AGRICULTURAL EDUCATION AGENCIES.

The rapid development of work in vocational agriculture has raised some problems of relationship between work organized under the provisions of the Federal vocational education act and the Smith-Lever Act. The frequent recurrence of some of these problems finally led to the appointment of a joint committee representative of the following: Association of Land-Grant Colleges, National Society for Vocational Education, Department of Rural Education of the National Education Association, and the American Association for the Advancement of Agricultural Teaching.

The report of this representative committee undoubtedly marks progress and its report is certain to have a significant influence on the development of policies throughout the country. Portions of the report are here quoted for this reason:

Because of the outstanding importance to the country at large that there shall be developed a well-rounded, thoroughgoing, and harmonious program for the promotion of the vocations of agriculture and home making—a task inviting the highest abilities of both the extension and the vocational forces—there was need to see the field in its entirety and to propose such adjustment of relations within it of the two great agencies created by law to do the work as would leave no gaps and would assign to the extension and to the vocational forces the phases of work for which they, respectively, are best fitted and which comply with the clear intent of the laws. The highest service in this great field will spring from a spirit of copartnership, or mutual respect, and from intimate association on a clearly defined basis, with the single purpose of serving the complete vocational needs of the communities. When both of the agencies shall have

been fully developed on a carefully adjusted basis, there will be large place for them both in every community.

The committees have taken as their starting point the cooperative extension or Smith-Lever Act of 1914, and the vocational education or Smith-Hughes Act of 1917, as these acts are national in scope, have been accepted and approved by the legislatures in all the States, and they impose certain common obligations on the agencies charged with their respective administration in the States. While in their major aspects the objects and methods provided for in these acts are clearly distinct and separate, there are other aspects in which the functions are less clearly distinguished, making possible parallelism and overlapping unless the respective spheres of activity are determined by agreement between the officers responsible for the administration of the two acts within the several States, and unless such agreement is faithfully observed in a spirit of mutual respect and helpfulness. The problem is further complicated by the great diversity in State laws respecting functions assigned to the land-grant colleges, on the one hand, and to the State boards or departments of education on the other hand. These latter complications make it impossible to draw a general memorandum of understanding which will fully apply in all the States. In the majority of States there will need to be special agreements based on existing legislation in the States.

The term "extension work" shall be understood to include, aside from special duties assigned by State laws in the several States, cooperative agricultural extension as defined and provided for in the Smith-Lever Act of May 8, 1914, accepted by the legislatures in the several States. The law provides that such extension work "shall consist of the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident at said colleges in the several communities and imparting to such persons useful and practical information on said subjects through field demonstrations, publications, and otherwise, and to encourage the application of the same."

Methods of types of extension teaching.—The extension teaching is, as a rule, conducted by means of cooperative projects with the county farm bureaus and other local agencies or groups. These projects are agreed upon between local members of the farmers' organizations and the specialists in the extension service of the college of agriculture. They are then carried into effect, usually by the following and other methods:

(a) Cooperative demonstrations given in fields and barns and other appropriate places.

(b) Lectures and addresses before public meetings, including community meetings, meetings of general groups, and meetings of special groups.

(c) Extension schools, in which instruction in subject matter of immediate practical interest is given over a period usually from three to five days in length, and seldom exceeding two weeks, in the localities where the students reside. Short courses or schools held at the agricultural college may be of any length required by the work to be done.

(d) Exhibits at fairs, expositions, and other local and State-wide meetings, at which subject matter is graphically presented.

(e) Supplying technical subject matter through bulletins, leaflets, special memoranda, outlines, and other means.

(f) Junior extension or boys' and girls' club work, which is the giving of instruction in and the dissemination of useful and practical information concerning special problems of immediate economic importance to the agriculture and home making of the several communities to boys and girls. This work is done by means of definite projects, conducted, as far as possible, at the workers' homes, under the supervision and direction of a competent leader, and by lectures, demonstrations, bulletins, circulars, correspondence, and personal visits. It involves the actual selection of a definite line

of work by the worker. It presupposes that the planning, the keeping of an accurate cash and labor record, and, as far as may be possible, the manual labor will be done by the project worker and that he will pursue a definite line of reading and study in relation to the project.

(g) Aid in meeting special problems of individual farmers.

(h) Conferences with county officers and representatives to arrange, organize, and supervise demonstration and other work.

The State-extension service at the college of agriculture is responsible for the organization and administration of all forms of effort defined herein under extension work.

Public-school education in agriculture and home economics aims to give an appreciation of the things of agriculture and home making, to develop acquaintance with the occupations, and to provide training in the elementary processes and practices requisite to wise selection of and efficient work in the vocations of agriculture and home making.

Agricultural instruction.—Three types of agricultural instruction of less than college grade may be offered by the public schools: (1) Prevocational agriculture in the grades, with or without supervised practice; (2) general agriculture in high school, with or without supervised practice; (3) vocational agriculture.

(1) Prevocational agricultural education is construed to mean the instruction offered as part of a general education in the grades to pupils, the majority of whom are less than 14 years of age.

(2) General agricultural instruction for students regularly enrolled in the high school includes work in any of the phases of agriculture.

(3) Vocational agricultural education shall mean that education of less than college grade, which is designed to meet the needs of pupils 14 years of age or over who are regularly enrolled for systematic instruction under the supervision of the schools and who intend to follow agricultural pursuits, and which gives the knowledge and skill necessary to the control of plant and animal production to the end of economic profit, and which is, furthermore, to articulate with other education so as to promote a desirable type of farm and community living.

By systematic instruction is meant instruction in regular, organized classes which meet at reasonably frequent intervals, at given centers, to pursue a consecutive series of lessons involving lectures and laboratory work. Systematic instruction specifically excludes general farmers' meetings, farmers' institutes, and extension schools of two weeks or less duration.

The organization for this work may include such provisions as the following, given in high schools and in special schools or classes:

(a) Four years' course. This course is designed for pupils regularly enrolled in the school who desire to pursue a four-year high-school course in agriculture.

(b) One, two, or three years' course. Such courses are designed for persons who wish to enter school to study agriculture for a period shorter than the full high-school course.

(c) Short-unit courses. Such courses are designed to meet the needs of persons who have left school and who desire to enroll for instruction in special phases of agricultural production during the season when farm work is slack. These courses will normally extend over a period varying from two weeks to three months and will be offered either at the school or in a community center tributary to the school.

(d) Evening classes. Such classes may be organized to meet the needs of persons engaged in farming who desire systematic instruction in special phases of their work. Instruction will be conducted by means of discussions, lectures, and demonstrations, and will usually be given one or more evenings a week for a period of several weeks.

(e) Part-time classes. Such classes are designed primarily for boys 14 years of age or over who are not enrolled in the above classes.

It is recognized that the functions, obligations, and responsibilities of the parties to the agreement, as defined by law, may be similar, with the possibility of overlapping, as in the fields of (1) the junior project work of the schools and the junior extension (boys' and girls' club) work of the college both in agriculture and home economics; (2) the part-time and evening home-making courses of the State board for vocational education and the home-economics extension work of the college; and (3) the short-unit courses in agriculture and home economics in the public schools and the extension classes conducted by the land-grant colleges. In a spirit of fairness to both groups of interests, this report seeks to present a basis for clear differentiation of the functions of the respective agencies in these closely related tasks. It is proposed that the work in these related fields shall be made a matter of cooperative agreement in the several States. Such cooperative agreement should recognize the following facts and principles:

1. It is the function, duty, and responsibility of the public school to provide education for all children and to provide such adult education as is authorized by law.

2. Under the law it is the function and duty of the land-grant college of agriculture to maintain extension service. The theory underlying extension service is that it is, first, to provide supplemental education for persons engaged in agriculture and home making, and, second, to enable the college and the Federal Department of Agriculture to bring their advances in knowledge to farmers and their families who can make the applications. Furthermore, by virtue of its staff of technical specialists and its responsibility for training vocational teachers, the land-grant college is in a position to furnish technical information and advice in the fields of agriculture and home economics to vocational work in the schools.

3. It is clearly recognized and affirmed that the college of agriculture is the source and authority in the State in technical subject matter in agriculture and home economics. The principle should be clearly observed that neither the State nor any lesser administrative unit charged with the supervision of vocational education should employ any itinerant subject-matter specialists for the purpose of giving technical instruction in any phase of agriculture or home economics. In so far as the vocational schools may have need for the assistance of technical specialists other than the regular vocational teacher or teachers in the local schools, they should look to the college of agriculture to supply such specialists. If, by reason of limitation of funds, the college is unable to meet all demands for aid on technical matters, the remedy is to be found in strengthening the resources of the college to fully meet the requirements and not in establishing subject-matter specialists as part of the State vocational system.

4. There are three types of situation to be considered: (a) Where agricultural and home-economics education is fully developed by the local schools; (b) where such education has not yet been undertaken by the local schools; (c) where such education is in process of development by the local schools.

- (a). Where the school provides a comprehensive program of agricultural and home-economics education which meets the needs of children and adults, through systematic instruction and supervised practice, the extension forces of the land-grant colleges shall not duplicate such work of the schools, but shall rather cooperate with the schools by providing, on request, subject matter, special lectures, conferences, and other similar services. This shall not be interpreted to limit the freedom of the extension forces to prosecute their extension work through local organizations of farmers.

- (b) Where the school does not provide such a program of instruction in agriculture and home economics, the extension service of the college should organize extension work. In such localities the school should give its fullest support and cooperation to the extension workers.

(c) It is recognized that in some places schools will be in the process of developing such educational programs. In these cases the following principles should apply: Extension workers should confine their work with children to those whom the school does not enroll in systematic vocational or prevocational project work, including supervised home practice, unless requested or authorized by school authorities to enroll them. The school should organize its work with adults to provide systematic vocational instruction as defined herein. The work should offer its facilities to the junior extension worker wherever the school has not in reasonable operation vocational or prevocational project work accompanied by supervised home practice.

5. Before undertaking junior extension work in any county the extension division should submit in writing to the county superintendent of schools the plans proposed for junior extension work in that county and should endeavor to arrange for a basis of understanding and cooperation. Copies of plans, when agreed upon, should be filed with the State department of education for consideration before being put into operation.

6. The State department of education should look to the land-grant college to furnish technical subject matter in agriculture and home economics in the form of outlines, leaflets, and bulletins for use in the public schools. It is understood, however, that no such material in agriculture and home economics should be used in the schools until approved by the State department of education.

AGRICULTURAL EDUCATION AT MEETINGS.

Association of land-grant colleges.—The thirty-fifth annual convention of the Association of Land-Grant Colleges was held at New Orleans, La., November 8-10, 1921. The presidential address of Dean H. L. Russell, of the college of agriculture, University of Wisconsin, dealt with "The agricultural experiment station in middle life and after." The following are quotations from this address:

The organization of the American experiment station, based on the Hatch Act of 1887, came as a necessary corollary to the teaching college of the earlier decades. Here through experimental inquiry new knowledge was discovered, new principles uncovered which would guide to better practice.

What this system has now brought about the entire educational world knows. The American system of education in the applied lines as given in the land-grant colleges has long been the object of admiration and emulation in many other countries. The influence of the American experiment stations has, I believe, been more marked than similar institutions in Europe in the main, because they have been more definitely articulated with the people whom they were designed to serve, through the fact that they were organized for the most part in direct connection with the agricultural colleges of their respective States.

The rounding out of this system of agricultural endeavor reached its final fruition in the passage of the Smith-Lever Act for the extension to the masses of the knowledge so gained. This triple grouping gives solidity and stability to this educational system. A three-legged stool is a firmer foundation than a two-legged support.

Necessity of maintaining proper balance within agricultural colleges.—To maintain a proper balance between these three lines of educational activity—teaching, research, and extension—is to keep these forces of the State in proper relation for continued growth. These various activities should be kept abreast of each other and not tandem. All of them are equally important in that each contributes to strengthen the other.

Educational balance changing in late years.—The rapid expansion of our colleges in number of students within the past decade has completely changed the balance between teaching and research. In the engineering field of the land-grant college

teaching has always dominated research, but even a decade ago the enormous influx of students into the agricultural courses in most institutions had only begun prominently to manifest itself. The inability of most institutions to adjust their staffs quickly to meet this rapid influx led to increasing assignments of teaching being imposed on staff members who heretofore had had more time for research. A 10 or 20 per cent increase in student body at the opening of the fall semester had to be taken care of. To do this many a piece of valuable research had to be laid aside, owing to the unexpected demands made by this influx of students for which no adequate provision had been made. So frequently has this situation developed in the past decade that it may almost be said in some institutions to have become habitual. And habits are hard. One may make a mistake once and it may be excused or overlooked, but when the same mistake is repeated it becomes a habit, and habits are often only an excuse to cloak a crime.

Another pressure that has developed in our colleges with unwonted intensity during the past decade is the unparalleled expansion of extension activities. This work has been the logical fruition of the developing agricultural educational system. If agricultural education is worth anything, it ought to be utilized in the main by those who live on the soil. An expansion in the function of an educational institution to meet the needs not only of the student body that comes to its doors but the great farming public who have a right to look to the college for the application of its research to actual practice, was in process of rapid development, even before the passage of the Smith-Lever Act. But the war accentuated the acceptance of this service. The drives for food production, which were possible through the organization of the emergency food agents, and the relative success attained through this instrumentality, have led to a public support and approval of extension work that is little short of marvelous. In 28 States the increase in extension funds by direct State appropriation had been approximately a million and a half dollars. This in large measure has been due to the provision in the Federal statute requiring the State to meet with additional funds the increasing appropriations made by the Federal Congress.

Extension work is popular because it performs a service that is appreciated. Its support is readily forthcoming because the taxpayers who pay the cost see that they themselves are getting some direct benefit from their money.

But with reference to research, there is no such outside pressure for the rapid and aggressive prosecution of the work of the experiment station. Here and there some farmer raises a question that bothers him and for which no solution has been found. He may put the problem to his experiment station and urge them to undertake its solution, but this is generally a still, small voice of individual request compared with the general demand which comes from the resident student or the farming community. Who is there that has in mind constantly the necessity of keeping up the supply of research to vivify and vitalize the character of the teaching and extension work as well?

Lack of adequate financial support in the matter of salary increments and the unusual competition of a commercial character which prevailed during the boom days of 1919 and 1920 made it increasingly difficult to hold promising young men in the field of research. The seed which was sown that year will show in the scientific results of the next decade. It was almost useless to talk to the graduate of a year or two ago and try to enlist him to enter the field of experimental endeavor. When commercial concerns stood ready to offer the graduate just out of college two to four times what the salary roll of any college could then warrant, and when living expenses were at the peak, it was scarcely to be expected that the promising young graduate would be willing to take up an academic career where the prospects were no better than those which prevailed at that time. With the commercial depression now on, conditions are again changing, and it may be expected that we are about to enter an

era in which more nearly normal relations are apt to obtain. In any event, for the sake of research in the future, it is incumbent upon administrative authorities to see that the most likely of our youth are given an opportunity to develop in this field.

Experimental work needs more adequate support.—This can not be done, however, without adequate resources for the experiment stations. The inadequacy of financial backing of these institutions as a whole is evident when one realizes how few of the States have supplemented the Federal Hatch and Adams funds in any material way. From the standpoint of funds the total resources of the stations have not been increased during the last six years, and, in the meantime, operation costs have been substantially doubled. For the year 1920 funds in a half dozen States were actually decreased over pre-war figures. Doctor Allen has just informed me that a similar situation has been reported for 1921.

More fundamental research now required.—In the field of production a more fundamental type of experimentation is now required than obtained a decade or so ago. The questions that lay near the surface and were easily asked have been easily answered. As the miner's shaft sinks deeper and deeper into the earth, more and more preparation has to be made to handle the problem of ore removal in a systematic and economical manner. As the depth increases, the water has to be pumped out, the lodes timbered and shored up, and many things done that contribute essentially but only indirectly to ore removal. So, too, with our more fundamental inquiries. Disease can not be cured until the cause is first ascertained, and even then the relation of host to parasite may involve physiological studies that lead far afield from the immediate object of treatment. The deeper we go into the problems of feeding, the more fundamental must our nutrition researches become. If we start on a practical problem of a pig-feeding experiment, we may before we get through find ourselves deep in the study of vitamins on such test animals as white rats and guinea pigs. The advances that have been made in recent years in our knowledge of nutrition have acquired just as fundamental study as Röntgen gave to the X ray or Madame Curie to radium.

Other subjects considered at the general session were: Relation of the Federal Bureau of Education to the State universities and colleges, Dr. John J. Tigert, United States Commissioner of Education; The world's need of Russia, Alonzo E. Taylor; Department extension plans, C. W. Pugsley, Assistant Secretary of Agriculture; The graduate work in the Department of Agriculture, E. D. Ball, director of scientific work.

Besides the general sessions there were sectional meetings devoted to resident teaching, extension work, and experiment station work. The sessions of the resident teaching section were devoted largely to a consideration of objectives and instructional problems in the agricultural college. The committee on instruction in agriculture, home economics, and mechanic arts reported on "Improved college teaching in vocational subjects." The following quotation from the report is indicative of the need of a larger opportunity for college teachers to have freedom for further study:

The replies indicate that in a few institutions quite general advantage is taken of the opportunities to do advanced work or to acquire professional training; in one-third of the institutions teachers rarely take advantage of such opportunities; and in eight of them (19 per cent) both presidents and members of the staff agree that there

¹ Report of Land-Grant Colleges, 1921, pp. 31-37.

are no opportunities for professional improvement. In several other institutions there is disagreement between members of the faculty as to whether opportunities for professional improvement are or are not afforded.

As to the number of teachers who have been absent for study the replies from 411 teachers indicate that nearly 80 per cent of them had been absent once at least, about half of them in vacation periods.

Our studies indicate that to the extent that opportunities to get away from the home institution for professional improvement are available and are well understood by college teachers, fairly good use is made of them. The experience of two or three institutions in developing special conferences or in employing special lecturers to aid college teachers in their effort for professional improvement shows that much can be accomplished in this way. It seems pertinent, therefore, to suggest:

(1) That college presidents, deans, and heads of departments study their own facilities for helping their teachers to improve their work.

(2) That a definite policy with reference to sabbatic leave and other leave for professional improvement be adopted by each college, and that all of these facilities be made known to all of their teachers.

(3) That teachers be encouraged in every way possible to study at other institutions where good opportunities for professional study are offered. It would be a good thing if colleges had funds that could be made available to pay the expenses of a few of their teachers each year to attend summer schools at other colleges.

That there is a growing recognition of the importance of professional training for those who plan to enter the teaching service in the land-grant colleges is shown by the recommendations that were presented by the committee on instruction at the 1922 session of the Association of Land-Grant Colleges. They are as follows:

1. That the Land-Grant College Association declare this year in favor of professional training for college teachers.

2. That beginning this year the land grant colleges make particular efforts to improve their methods of teaching by some special means best suited to their respective facilities.

3. That a number of colleges having strong departments of education offer immediately professional courses for graduate students preparing for college teaching, including the development of graduate work, with special emphasis on its application to the technical fields of agriculture, home economics, and engineering.

4. That until such time as courses in methods of college teaching can be made readily available to teachers of technical subjects, these teachers be permitted and encouraged to avail themselves of such courses in educational psychology and the principles of teaching as are readily accessible, even though these courses are not designed primarily to meet the needs of college teachers.

5. That the institutions with well-established departments of education make an effort to offer strong summer courses so that members of the teacher-training staffs in other colleges may be given opportunity to pursue special work in these colleges.

We believe and urge further:

6. That greater use should be made of departments of education and that these departments should become service departments in connection with the instructional work of land-grant colleges, as well as training departments for teachers.

7. That the land-grant colleges make definite and liberal arrangements for professional training of teachers in service and urge such teachers to take professional courses at summer schools or elsewhere for at least two successive years.

^a Report of Land-Grant Colleges, 1921, p. 96.

8. That instructors in the technical departments be urged to pursue graduate work in education with particular emphasis on research in some problem or teaching in their technical fields.

9. That frequent conferences should be held of teachers handling the same or related subjects. These conferences should aid in developing esprit de corps among the instructors, in improving teaching methods, in considering textbooks, in revising schedules of assignment, and in scrutinizing teaching content.

10. That much attention should be given by the heads of departments to guiding younger teachers. Under supervision beginners in teaching should be given opportunity to teach a variety of subjects, thus broadening the horizon of their interests.

11. That experienced and successful teachers should have charge and take part in teaching introductory and basic courses.

12. That beginning with 1925 candidates for teaching positions in land-grant colleges be required to have at least 6 semester hours of professional training, including courses in educational psychology and methods of teaching. As soon as practicable this requirement should be increased.

The last year or two have witnessed considerable activity on the part of colleges of agriculture that indicates a recognition of the importance of good teaching. In a number of institutions leading educators have been secured for the purpose of addressing the faculties on teaching problems. In other cases, more formal conferences dealing with educational questions have been organized, and there has been a very general increase in the demands made on the departments of education to assist other departments with problems of selection, organization, and presentation of teaching content.

National Society for Vocational Education. As this body is now organized there is a section devoted to agriculture with a vice president in charge of it. The last meeting was held in Detroit, Mich., on December 1 and 2. The discussions were devoted largely to a consideration of the teaching problems involved in the development of agricultural instruction under the provisions of the Federal vocational education act.

The American Association for the Advancement of Agricultural Teaching.—The attendance at the meetings of this body apparently has been decreased as a result of the development of the agriculture section in connection with the National Society for Vocational Education. As usual, the 1922 meeting was held in connection with the meeting of the Association of Land-Grant Colleges. The questions receiving most consideration were graduate work in agricultural education and the training of teachers of vocational agriculture.

Educational work of the Department of Agriculture.—October 1, 1921, the Office of Extension Work in the North and West was combined with the similar office for the South, so that at present the extension activities of the department are handled coordinately through one office. Something of the magnitude of this work may be gathered from expenditures as given in the 1922 report of the States Relations Service:

Washington administration.....	\$235, 000
State administration.....	1, 009, 847
County agent work.....	9, 670, 786
Home-demonstration work.....	2, 980, 741
Boys' and girls' club work.....	1, 244, 092
Extension specialists.....	3, 182, 747
Extension schools, fairs, publications, and miscellaneous.....	409, 147
Total.....	18, 732, 360

The work of the county agricultural agents has been somewhat complicated by the attitude of certain business interests toward the agents aiding farmers in their purchasing and marketing problems. Some have held the view that it was the business of the county agents under the Smith-Lever Act to assist the farmer with his problems of production, but that he was outside his province when he attempted to help in his cooperative enterprises. The view that has come rather generally to be accepted by the administrative authorities, both State and Federal, is given in the report for 1922 of the States Relations Service, as follows:

The carrying of extension work in marketing by county agents is an entirely proper extension activity, and that it is as much the business of such agents to aid farmers in an educational way in their marketing problems as it is to counsel with them on matters of production. This point of view has been generally accepted by administrative officials in charge of cooperative extension work in all of the States, with the understanding, however, that the agent shall not himself buy or sell for the farmer or any farmers' association, but rather shall teach farmers the principles and methods of marketing, cooperatively or otherwise.

During the year the fact has also been impressed upon the public consciousness that the county agricultural agent is essentially a public official and therefore may engage with propriety only in business of a public nature, being administratively responsible to the land-grant college of the State concerned, regardless of the sources of funds which enter into his employment.*

It will undoubtedly be some time before this view will be universally accepted by business interests.

Boys' and girls' club work.—According to the report of the States Relations Service for 1922 there were engaged in boys' and girls' club work 122 State club leaders and 201 county leaders; and, in addition, a large proportion of the 2,853 county agricultural and home-demonstration agents were giving some time to this activity. The total enrollment for the year was 490,642, and the total value of the products was computed at \$7,069,877. The report indicates that definite effort has been made to secure closer integration of this work with the activities of the farm and home bureau organizations, but there is no statement regarding attempts to emphasize coordination of the work with the school system so that the educational phases may receive more general recognition than is now the case.

* Report of the Director of States Relations Service, 1922.

CHAPTER XII.

SECONDARY EDUCATION.

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CONTENTS — Introduction—Growth of public high schools—Supervision—Teaching staff—Vocational education—Homogeneous grouping—Supervised study—Pupil self-government—Extracurricular activities—The small high school—The junior high school.

INTRODUCTION.

In the report of the Commissioner of Education for the year 1914 is the statement that so far as the number of secondary schools is concerned the great majority are undoubtedly continuing traditional activities without consideration of the needs of the pupils or the results actually obtained. This same assertion can be made to-day of many high schools, but not of so many as in 1914, for happily many of the high schools have within the past few years broken away from some of the traditional practices to which the Commissioner of Education referred. More schools are planning programs of study that consider the present and future needs of the high-school boy and girl and they are giving more attention to the results actually obtained. The small secondary school is gradually ceasing to be a mere college preparatory school, yet the program of studies in many of these schools is still based wholly upon the entrance requirements of certain colleges. The program of studies in many school systems, especially city school systems, has been organized so as to include six years of secondary-school work, divided into two administrative units of three years each, the one unit known as the junior high school and the other as the senior high school. The reorganization of the schools on this plan is the outstanding achievement in secondary education within the past few years, although much remains to be done to perfect the reorganization.

Among other movements that have received the attention of secondary-school people are application of educational and mental tests to the secondary-school field; the homogeneous grouping of pupils; vocational education; extracurricular activities; the supervision of instruction; supervised study; pupil participation in school government; and the improvement of the small high school.

GROWTH OF PUBLIC HIGH SCHOOLS.

The growth of public high schools has been phenomenal. In 1900 only 0.68 per cent of the total population were enrolled in the public high schools of the country, while in 1920, or 20 years later, 1.76 per cent were enrolled. In 1900 only 3.3 per cent of the children enrolled in the elementary and high-school grades were in high school, while 10.2 per cent were enrolled in high schools in 1920. If data for the year 1922 were available they would probably show 12 or 13 per cent enrolled in high school, since the high-school enrollment has increased greatly within the past two years. Of the pupils enrolled in secondary schools, both public and private, the per cent enrolled in public high schools increased from 82.4 per cent in 1900 to 91 per cent in 1920. The per cent of increase in enrollment in the public high schools should, however, not be misconstrued to mean that the private high schools have not grown. The increase in enrollment in private high schools has about kept pace with the increase in population. The relative change is not due to an absolute decrease in the status of the private high schools but to the phenomenal growth of the public high schools.

Even with the increase in enrollment in both public and private high schools, there is still an army of 1,967,651 boys and girls from 14 to 17 years of age, inclusive, who were not in school. If these boys and girls could be brought into school about 65,000 additional classrooms would be necessary, counting 30 to a class; and about 4,000 additional high schools of 500 pupils each would be required.

Just why these boys and girls are not in school may be assigned to several causes; one is that some parents are not economically able to keep their children in school; another cause is that the courses of study are not adapted to the needs and the intelligence of these children. Of course not all children 14 to 18 years of age will ever attend high school, but that more could attend is only too evident. That a larger percentage than formerly are attending, as is shown by the foregoing figures, is encouraging; and as courses of study are improved by providing for individual differences more fully than they do at present, more girls and boys will remain in high school.

SUPERVISION.

That high-school teachers, especially those in the smaller high schools, need supervision can not be questioned, since many of them have begun teaching in high schools without any experience in the elementary grades and without any professional preparation. Many do not have the least conception of modern educational methods. The methods which they tend to pursue are the only methods with which they are familiar, namely, those which are prevalent among

college professors, and which, however good they may be for college classes, are poorly adapted to high-school instruction. The point of view of such teachers tends to be that wherein the subject and its content are of paramount importance, often overshadowing interest in the pupil himself. Unless these teachers receive help, they continue in the use of their ineffective methods. The person to help them is the high-school principal; but too often the high-school principal has no great ability as a supervisor. He may know little of educational methods himself. To him supervision may mean clerical work, such as excusing absences, preparing schedules, making out report cards, running errands, and the like. All these things are necessary, but a principal should give considerable time to a systematic observation of teaching, to a diagnostic study of results, and to conferences with teachers concerning the teaching observed and the methods that should be used to secure better results.

Some high-school principals do not supervise, saying that each teacher is a specialist and should know more than they about the subject that he teaches. While the principal may not have so profound a knowledge of the subject as the teacher, he should be familiar enough with general and special methods of teaching to assist the teacher if he is failing to secure results. A few years ago only a very few high-school principals could be found who made any pretense to supervising or who knew how to supervise, largely from the fact that they themselves knew little but the academic subjects studied in college. Few had taken courses in secondary education. To-day, however, the younger high-school principals are entering upon their work more fully equipped than were the high-school principals of 10 years ago, and they are consequently giving more attention to the technical phases of high-school administration and supervision. But even now they give too little attention to the supervision of instruction.

A study made by the North Central Association of Colleges and Secondary Schools reveals some interesting practices:¹

The typical principal pays a visit to each classroom once in two weeks and stays from 15 to 20 minutes; he comments orally to the teachers on the work observed; offers constructive criticisms; supplements his visits with personal conferences; invites teachers to seek advice from superiors; and holds frequent teachers' meetings designed to consider and improve methods of teaching. To do this requires from one-tenth to one-fifth of all the available time. About three-fourths of the principals likewise make a practice of encouraging teachers to visit other teachers in their own buildings or in other systems; bring pressure to bear upon teachers to attend college or university summer sessions at least once in five years; and make increases in salaries rest in part upon continued systematic effort at self-improvement.

¹ Proc. 26th An. Meeting, N. Cen. Assoc. Col. and Sec. Schools, Part I, pp. 56-57.

On the other hand, only a variable minority of principals ever give demonstration lessons with the class at the time of their visits, conduct reading-circle or study clubs of high-school teachers, hold teachers' institutes oftener than once per year, or have any form of promotional examination for teachers. Only about half the principals ever participate at all in the class work witnessed during their visits of supervision or ask any questions of pupils or teachers.

In the newer fields of appraising, recording, and experimenting, only from about one-tenth to three-fifths of the principals make use of rating scales in order to measure the accomplishments of teachers and pupils. This, of course, is not surprising. That the majority of them are interested in the new scientific movement is evidenced by the fact that 87.6 per cent profess to be lending their support at present to the movement centering in scientific studies and experiments, while 42.9 per cent are actually carrying on, in their schools, studies and experiments of these kinds.

Few schools have as yet a bureau of statistical measurements or an educational or psychological clinic. Moreover, while 63.1 per cent make a practice of analyzing the data relating to the promotion, failure, and elimination of pupils and of formulating an age-grade report each year, only 35.1 per cent have any well-organized plan of education and vocational guidance, only 29.7 per cent have placement bureaus, and only 31 per cent have any plan of follow-up analyses and help. Only 45.4 per cent likewise make any study of the cost of instruction by subjects.

The small rural high school especially suffers from lack of supervision. The principal of such a school is often the principal of the elementary grades and teaches several classes a day, thus making it practically impossible for him to give much thought and attention to the supervision of either the elementary or the high-school teachers. The rural school survey of New York revealed the fact that the median principal in schools with a high-school enrollment under 50 gave only 10 minutes a day to supervision of high-school instruction, and that 78 principals in schools of this class gave no time to high-school classroom supervision. In the schools with a high-school enrollment of 50 and over the median principal gave 11 to 20 minutes to supervision of instruction in the high school. These conditions with respect to supervision are without doubt typical of the small high school in every section of the country. The New York rural-school survey committee says, regarding the supervision of high-school instruction in that State:

One of the most outstanding needs of the New York rural high school is that of supervision of classroom instruction. There is also need, in an almost equal degree, of supervision of school organization and the broader and more comprehensive phases of the work of the local school.

That State high-school inspectors can not supervise actual instruction is evident. About all they can do is to inspect and to pass upon the standing of the various high schools of their respective States and to outline courses of study. The New York school survey says regarding supervision by the State department of education:

In the first place, it can not keep closely enough in touch with the local teachers to be in a position to understand their weaknesses and strength, the necessary basis for constructive supervision. In the second place, it can not know local problems and conditions peculiar to communities. In the third place, it is not economical either of time or money for all supervisors to go out from the State office to all parts of the State. Finally, granting that the factor of distance could be overcome, the burden of efficient supervision would be so great as to require an unwieldy central organization.

In the smaller cities of the country, the high-school principal usually has an excellent opportunity for supervision, but as previously stated he does not usually make use of the opportunity, as he too often considers it more necessary to look after mechanical details. In these cities the high-school principal has practically all his time free from teaching and has the supervision of from 10 to 30 teachers. If a principal under such conditions fails to supervise instruction, he is evidently not prepared for the position.

In cities where the high schools are large the high-school principal too often makes supervision of instruction a secondary matter. The school survey report of Philadelphia says, regarding the supervision by principals in that city:

Here and there a principal has developed a professional school interest in teaching or has stimulated one or more heads of a department to effective supervision. But even the best principals have been too much burdened with administrative detail, much of which could well be delegated to others, to exercise the leadership that is necessary.

What is said regarding supervision of high-school instruction in Philadelphia can be equally well said regarding such supervision in many other cities.

The principal of a large high school can not get away from the fact any more than can the principal of a small high school that he is responsible for the character of the instruction in his school, provided of course that the board of education furnishes him with assistant principals to look after administrative details.

The Baltimore school survey report says, regarding the work of the high-school principal:

A major part of a principal's time should be spent in the improvement of instruction—either direct or indirect. The principal should be constantly active in stimulating and directing the teachers to select and organize subject matter better suited to clearly defined purposes of the school; and he should, after frequent visits to full-period recitations, encourage and assist teachers either individually or through teachers' meetings to grow in service. Indirectly, the principal should assist teachers through his cabinet of heads of departments. These heads need encouragement, stimulation, and coordination just as truly as do teachers, in order that they may be most effective. There is no one who can give them the desired help except the principal.

Supervision by department heads is a failure largely unless the principal keeps the main purpose of his office in mind; namely, that

of supervision. This fact is brought out in the school survey report of Philadelphia, which says:

The system of supervision through heads of departments has in a large percentage of cases failed in Philadelphia, chiefly because a majority of principals have not demanded, systematically encouraged, and made possible the recognition of professional supervision as the prime obligation of a department head.

VOCATIONAL EDUCATION.²

Within the past few years hundreds of high schools have organized vocational courses in agriculture, trades and industries, home economics, or business. Many schools, especially the larger high schools, have organized courses in several or all these subjects.

In 1916 the United States Bureau of Education made a study as to the nature of the agricultural instruction in the high schools of the country and found that many did not have a distinct purpose in their instruction; that 20 per cent of the schools confined their instruction to classroom work; that 50 per cent supplemented the classroom instruction with laboratory exercises and trips to farms; and that only 30 per cent combined classroom instruction and laboratory work with practical farm work. Since 1916 great forward steps have been taken in the teaching of agriculture in the secondary schools. The methods of teaching have been greatly improved and the courses of study better organized, so that vocational education in agriculture actually functions in the community and receives the support of farmers.

That vocational agriculture has made great strides it is only necessary to call attention to the number of high schools teaching agriculture in 1918 and in 1922 and to the number of students enrolled in the subject these two years. In 1918 only 609 schools, nearly all of which were all-day schools, received Federal aid for the teaching of agriculture, while 1,937 all-day schools received aid in 1922, an increase of 218 per cent. In addition there were 238 evening and part-time schools in 1922, making a total of 2,175 agricultural schools of all types. In 1918 there were only 15,453 pupils enrolled in vocational classes in agriculture, while at the close of the year 1922 there was a total enrollment of 59,276, or an increase of 284 per cent.

The increase in the enrollment in trade and industrial classes has also been great. In 1918 there were enrolled in Federally aided all-day trade unit schools 18,596 pupils, and 31,390 pupils in 1922, or an increase of 68 per cent.

Each year since 1917 has marked an increased interest in home-making education and in wider development of State programs. According to the sixth annual report of the Federal Board for Voca-

² For complete discussion of vocational education see sixth annual report of Federal Board for Vocational Education, upon which this brief account is based.

tional Education the year ended June 30, 1922, marks in many ways a more real development in vocational education in home economics than has been made in any other year. The report continues:

It takes much effort on the part of State departments of education to get over to the superintendents in the cities and small towns the real meaning of vocational education, and only time can demonstrate to them the value of this type of training. The reports from the States, in the main, show a support of the program which is based upon both knowledge of what vocational education in home economics can do and a real faith in the sort of education for the girls and women of the country.

The past year's reports show that every State has organized some type or vocational classes in home making to meet the needs of the girls and women. Forty-seven States are offering courses to approximately 26,000 girls of 14 to 18 years of age who are in school.

For many years the city high schools of the country and some small town and rural high schools have had courses in commercial education. These courses have, however, been confined largely to stenography, typewriting, and bookkeeping, and have only in some instances been what would be considered vocational. The Federal Board for Vocational Education says in its sixth annual report:

The courses were practically always confined to teaching bookkeeping or shorthand with related subjects, as if a knowledge of both or either of these subjects constituted the only information needed for success in the world of business occupations. The public schools, following the financially remunerative practice of the private schools, usually required pupils to take both bookkeeping and shorthand, although in the large cities there was but little demand for workers with a knowledge of both of these subjects. Further, the shorthand and bookkeeping, in most high schools, were taught the children in the first two years of the high-school course—that is, children who averaged 14 years in age and who therefore had completed two years of high-school work by the time they were 16—although business men do not employ 16-year-old boys and girls as either bookkeepers or stenographers. The bookkeeping as taught was highly technical and full of obsolete practices and usages and its value was much impaired because no preliminary instruction about business practices or usages was included; hence the pupils had no background for the extremely technical bookkeeping work required of them. In the shorthand classes the teachers apparently assumed that a knowledge of shorthand and typewriting per se was sufficient to transform a high-school sophomore into an efficient stenographer, as instruction in the general office duties of a stenographer was seldom given. Some of the more progressive schools did have classes in office practice, though usually these were open to the limited few only who were about to graduate.

The instruction in commercial subjects was almost never based upon local practices or adapted to local needs, and, since the teachers practically never had had business experience, it was extremely theoretical and frequently misleading. In addition to these immediate vocational shortcomings, the schools had never developed the related subjects necessary for an intelligent social and economic interpretation of the technical commercial work. The academically trained high-school principals usually prescribed for the commercial pupils a course of study which included a large amount of college

preparatory subjects entirely unrelated to either the life or business needs of the pupils.

Realizing the need of developing commercial courses really vocational in character, 15 cities now have full-time directors of commercial education. Several more are ready to appoint such directors, but have not because men with satisfactory training and experience could not be found. A few State departments of public instruction, in order to improve the commercial work in the high schools under their jurisdiction, have employed State directors of commercial education.

HOMOGENEOUS GROUPING.

Some high schools are beginning to group pupils according to the ability of the pupils to make progress. This plan is, however, confined mostly to the large high schools, and wherever it has been tried it has usually proved successful.

If pupils of all degrees of ability are placed in the same section it is evident that some have too much to do and that others will find the tasks too easy. The slower children, nagged and threatened with failure, become discouraged, while the brighter children, not having enough to do to keep them busy, form bad habits of study and the habit of laziness. They get the notion that any task can be accomplished without work, that their brilliancy will carry them through. Not only is harm done by placing the slow and the bright child in the same section, but harm is done the average child by placing him in a section with the slow and the bright. He sees the slower pupils gaining promotion with a mere passing mark of 70 or 75, with work only three-fourths perfect, and the brighter pupils getting through with little work. The average child is therefore tempted to follow the example set by the bright child of doing little work, and of the slow child of making a mere passing mark.

If the pupils were divided into at least three groups—the slow, the normal, and the bright—each group could proceed at the pace of its ability. The slow group would cover a minimum amount, the normal group a little greater amount, and the bright group considerably more. Each group would be making practically the same grades. The overage and the bright child would have to work just as hard as the slow child to make a grade of 90 and to maintain their standing in their respective groups. By placing the slow children in one group it would be possible for them to make grades from 90 to 100. They would learn to do something well and not to be satisfied with a 70 per cent accomplishment.

Of course the plan of grouping pupils according to their ability is not practicable in the very small high school with an entering class

of only 20 or 30, but in a high school with an entering class of 75 three groups can be formed. Even in a school of this size the grouping could not continue throughout the four years owing to the fact that the upper classes would be too small to be divided into three groups, but in a school graduating 75 pupils a year the classes could be divided into three groups for at least the required subjects. In the large schools more than three groups could be formed to advantage. If there are 125 pupils in the first-year class they can be divided into five groups of 25 pupils each, thereby making the groups more nearly homogeneous than they would be if divided into only three groups.

This plan of grouping is applicable to all kinds of schools, elementary, junior high, and senior high, or the regular four-year high school. It is probably being tried more extensively in the junior high school than in the elementary or in the senior high school. Since one of the aims of the junior high school is to provide for individual differences, the plan of grouping pupils according to their ability is one way to realize the aim.

There are many difficulties to be overcome before the plan can be made successful. Some teachers oppose it, saying that if all the slow children are placed together there will be no enthusiasm or incentive, that the pride of the children will be hurt, and that they will be classed as the "dummies" of the school. There is also objection of the parents to be met who say that the plan is not democratic, since all children are "created equal." To the schoolman these objections may not seem valid, but before he can make a success of his plan he will have to meet all these objections.

The principal of the Edison Junior High School, Berkeley, Calif., who has been experimenting with homogeneous grouping of junior high-school pupils, says regarding the success of the plan:³

With this method of classification the pupils are allowed to advance as rapidly as their powers permit; in fact, they classify themselves. They gain time. The old lock-step method is eliminated. They compete with their equals, thus deriving a sense of satisfaction through the knowledge and realization that they stand on a par with their classmates. This plan removes almost entirely the questions of discipline because when a pupil is kept busy he usually keeps out of mischief. A richer curriculum is offered to every pupil, with the result that he practically works up to his capacity in every respect. There are scarcely any failures—only those who lose out on account of absence.

The method of classifying pupils according to their ability is by no means uniform, as was found by August Dvorak, of the University of Minnesota, in a study⁴ that he made of the practice of 86 junior

³ Sierra Educational News, vol. 18, December, 1922.

⁴ School Review, vol. 30, November, 1922.

high schools in classifying their pupils. In summarizing the result of his study Mr. Dvorak says:

Junior high schools are more progressive in the use of scientific methods for measuring individual differences than are the traditional 8-4 schools; nevertheless, there is much room for improvement, since 12.5 per cent of the junior high schools studied are depending on random selection of teachers' judgments alone for the classification of pupils according to individual differences. One-third of the schools studied use standardized educational tests and one-half use standardized mental tests. However, inquiry discloses that months afterwards some of the tests were either unscored or untabulated. One may well question whether many junior high schools are going about the task of fulfilling the peculiar functions of recognizing individual differences in anything like the scientific way in which it should be and can be done in the present stage of development of tests.

The best method of tentatively classifying pupils into sections is by use of standardized mental tests. This can be done when the pupils enter high school if it has not been done before. If the pupils are first classified by means of mental tests, they can then afterwards be reclassified on the basis of the teacher's judgment and by means of educational tests. Experiments thus far conducted, however, reveal the fact that the mental tests are reliable enough for a first classification, and that it is seldom necessary to change pupils from one group to another after they have once been classified by means of mental tests.

PUPIL SELF-GOVERNMENT.

For many years there have been various attempts to organize high schools so that the government of the school would be largely in the hands of the pupils, but the failures have greatly outnumbered the successes. Indeed, what may be considered a successful self-governing school to-day may be considered a failure to-morrow, probably because of changes in the faculty or because a new principal takes charge. That high-school pupils should be given an opportunity to participate in the government of the school few will deny, but just to what extent is the question. Absolute self-government by high-school pupils is now considered impracticable, but some form of participation is practicable and desirable. Many schools find that student councils, elected by the students, are helpful to school morale and that they give the pupils an opportunity to participate in the government of the schools. Very few school principals would to-day advocate more than student cooperation. Possibly most of them would agree with the report of a committee, appointed by the State Department of Public Instruction of Massachusetts, to make recommendations regarding various high-school problems. The committee says regarding student participation in school government: ⁵

⁵ Manual.

A school should proceed cautiously in changing from a traditional form of school control to that form where the pupils share the responsibility. A school should also distinguish between student cooperation and student self-government. No doubt should be left in any minds that the school heads are the final authority and that counselors are advisers; that they are cooperating and suggesting measures for the good of all. For these reasons student cooperation in school government will probably be the phrase that will be least likely to upset the mental stability of the school children. In our opinion, student self-government is a pernicious phrase, as it conveys the idea of the pupils having been granted a power greater than that of the school authorities.

It would be highly advisable for a school adopting this form of control to work out with the advice of the principal a constitution to be adhered to by both principal and pupils. This constitution should give to the principal the power of vetoing the acts of the council. Provision should be made in the constitution for the removal of a member of the council by a majority vote of the council or by vote of the teacher and principal. The functions of the council should be to suggest and advise principal and pupils as to how the school may be improved.

The council should be composed of representatives from the different home rooms of the building. The members should be required to report to their respective home rooms the acts of the council and the reasons thereof. The principal or his representative should attend all council meetings. These meetings should be conducted strictly according to parliamentary procedure. The aim should be, always, education for citizenship and leadership. Student participation in school government is satisfactory only in so far as it accomplishes this.

SUPERVISED STUDY.

To affirm that supervised study has been introduced by comparatively few of the 17,000 or more public high schools of the country may be denied by its advocates, especially in view of the fact that its virtues have been set forth so many times in the classrooms of schools of education, from the platform, and through the columns of educational journals, and that its value has been demonstrated by numerous careful experiments; but reports from the high-school inspectors of three-fourths of the States indicate that supervised study is by no means general. To the question, To what extent has supervised study been introduced into the high schools of your States? the following are typical replies: "Not widely"; "about 25 per cent"; "only in the larger high schools"; "in some of the junior high schools but not extensively in the senior"; "don't know"; and "gaining way." Only two of the 36 high-school inspectors report that supervised study has been very widely introduced in their respective States.

In general, supervised study has proved successful when tried under favorable conditions. The chief difficulty, according to the State high-school inspectors, is that few high-school principals and teachers, even after they understand the purpose of supervised study,

know how to teach pupils how to study, since it requires the mastery of a technique entirely different from that of "hearing lessons."

In some schools supervised study has been attempted in large study halls, but anyone who has ever presided over a large study hall knows that the teacher in charge can do little more than keep order. Supervised study in the sense of teaching children how to study is impossible in a hall where children from all grades assemble and where some are studying one subject and some another. The most successful plan is that of the lengthened period of 60 or more minutes divided so as to afford an opportunity to the teacher of directing the preparation of the lessons he has assigned, but this plan has failed in some schools because the teachers use the entire period for the usual recitation; and again, in other schools, the period allotted to supervised study has been used as a time to coach the slower pupils, the teacher not understanding the difference between coaching and directed study.

Although supervised study in the real sense of the term has not been introduced by many of the high schools of the country, it is evident that more and more schools will introduce it as the principals and teachers fully understand its purpose and its technique. At present the junior high school offers the best opportunity in the secondary field for directed study, and it is here that its value will best be demonstrated.

EXTRACURRICULAR ACTIVITIES.

One of the hopeful signs in secondary education is that numerous activities that assist in developing the intellectual, physical, and social needs of the pupils are being introduced. These activities are usually termed extracurricular, but some of them tend to develop the pupils more than some of the regular curricular activities in that they make the school work more vital. To not a few principals and teachers this may seem heretical, for the idea still persists in many quarters that children go to school to study from books and that the extracurricular activities are "fads" and "frills." However they may be considered, they have found their way into the high schools and will remain there. The only thing to do is to guide and direct them.

The social activities have probably received the greatest share of criticism and condemnation. In many instances the social impulses of the students have been so restricted that extraneous activities, such as the high-school fraternity, came into existence. The attempt to dam up the social impulses of high-school pupils has proved as futile as any attempt would be to dam up a mighty river, which, if it can not flow in its natural channel, will find other channels. High-

school principals are gradually coming to realize the fact that their pupils must have a certain amount of social life and are attempting to provide something more wholesome than the commercial dance hall or the high-school fraternity clubroom.

Another extracurricular activity that has occupied the attention of high-school principals and teachers is athletics—but athletics in all schools is here to stay. At first only a few pupils participated; now a large number are participating from the fact that all kinds of games have been introduced. It is no longer football alone, but basketball, tennis, track, hockey, etc. Most schools have made great strides in the management and control of athletics. Once anyone enrolled in high school, no matter how many times he failed in his class, was permitted to take part in athletic contests; now a pupil in order to qualify must make a certain class standing.

The problem of athletic activities is being solved by making them a part of the general scheme of physical education which is being introduced as a part of the regular curriculum, so athletics may not be regarded entirely as an extracurricular but as a curricular activity.

Besides the social and athletic activities of the high schools there are organizations and clubs of various kinds that play an important part in the all-round development of the pupils and that make school work more interesting. Among the organizations and clubs that have found their way—in some cases, fought their way—into the high schools are dramatic associations, high-school orchestras, debating teams, science clubs, radio clubs, French clubs, kodak clubs, etc. While all these are classed as extracurricular, each of them is helping to vitalize some subject and to make it of some use to the pupil while in school.

The dramatic association and the debating teams are great assets to the English department; the science club to the science department, the French or Spanish club to the modern language department, and so on throughout the list. In fact, every extracurricular activity can in some way be coordinated with some department. This is well illustrated by the correlation of extracurricular activities with the department of business education in the high school of Meriden, Conn., which, as described in the *School Review*⁶ of November, 1922, has cooperated with all the organizations of the schools in the management of their business matters. Concerts, plays, athletic contests, dues, subscriptions, and all other affairs involving business relation are managed according to business methods, and all returns are accurately accounted for. It is evident that valuable training is thus secured by the participators in these ac-

⁶ The Correlation of Extracurricular Activities with the Department of Business Education.

tivities and that real business experience is gained by the students who are definitely preparing for a business career.

Since many of the extracurricular activities have a real educational value, the question is often raised as to whether pupils participating in them should receive extra credits toward graduation. Some schools are granting such credits. "About as satisfactory a plan as any to be found," says Jesse Davis,⁷ principal of the Central High School of Grand Rapids, Mich., "is to make certain allowances of time and material in those subjects which deal most directly with the nature of the 'outside' or 'social' work." By this method of granting credits the pupils taking part in debates, in editing the school paper, or in dramatics are given credit by the English department, and those pupils who take active part in the French, science, and other clubs are given credit by their respective departments. Work done on the athletic field is given credit by the director of physical education. The problem at present is that of working out the amount of credits to be allowed. As the educational value of many of these activities are recognized they will be considered not entirely extracurricular but as partly curricular and in some cases entirely curricular.

HIGH-SCHOOL FRATERNITIES.

Although the high-school fraternity is here discussed under the heading of extracurricular activities, it should not really be considered an extracurricular activity but rather as an extraneous one, since there is no relation whatever between the high-school secret organization and the curriculum.

So inimical have high-school secret societies become to the democratic American high school that State legislatures have enacted laws prohibiting them and school boards in States having no legislation on the subject have formulated rules to govern the high-school fraternity. Nineteen States now have laws forbidding such organizations in high schools. These are California, Colorado, Indiana, Iowa, Illinois, Kansas, Maine, Michigan, Minnesota, Mississippi, Montana, Nebraska, New Jersey, Ohio, Oklahoma, Oregon, Rhode Island, Vermont, and Washington. In most of these States the district school boards are charged with the responsibility of keeping secret societies out of the schools and are granted powers to expel pupils who persist in maintaining such organizations.

In Iowa and Minnesota the law forbids not only secret societies but any organization not sanctioned by the school authorities. In Washington the law will not allow the State board of education to accredit any private academy where such societies exist.

⁷ The Modern High School, Johnson and others.

The New York City Board of Education, considering high-school secret societies inimical to the school system of that city, has requested the State commissioner of education to recommend to the legislature the passing of a law prohibiting such societies and providing penalties for pupils connected with them. The aim of the New York school authorities is to suppress any organization which seeks to organize and perpetuate itself by taking in students upon the basis of the decision of members of the organization, rather than from the free choice of pupils otherwise qualified to belong to it.

High-school fraternities in the District of Columbia were so undermining the democratic high-school idea of equal opportunity for all students that the board of education adopted a rule prohibiting members of any high-school organization not approved by the faculty from participating in athletics and other extracurricular activities.

Although many State legislatures have enacted laws prohibiting high-school fraternities, these organizations still exist in some of these States. For example, the high-school principals of Oakland, Calif., call attention to the fact that when the law prohibiting high-school fraternities in that State was passed 21 high-school secret societies in Oakland went at least into temporary eclipse, but that the school authorities have been made aware through various channels that organizations of this character exist among the students of the Oakland high schools as clandestine and illegal groups.

It is the belief of the Oakland high-school principals that membership in such an organization, under the present conditions, is bound to be a serious handicap to the development of that manhood which fathers and mothers covet for their children.

The problem of entirely eliminating high-school fraternities is one difficult of solution. While there may be enough public sentiment in a State to enact a law prohibiting high-school fraternities, there are always communities where the sentiment is not strong enough to eliminate such organizations. Often parents can see no harm in their children belonging to these secret societies, so the first step toward abolishing them is to awaken parents to the fact that such organizations tend to make discipline difficult and to undermine that democratic spirit which the public school fosters.

The solution lies partly in cooperation between parent and teacher. If parents refuse to cooperate, drastic measures should not be wanting to prohibit students from being members of such an undemocratic organization as a high-school fraternity. That there is no place for such an organization in the American high schools is the opinion of all school superintendents, high-school principals, and teachers, though many of them belong to college fraternities which usually have a different motive from that of high-school fraternities.

Of course, mere legislation will not eliminate the high-school fraternity. As the superintendent of schools of Duluth, Minn., says in his report for 1920:

To legislate them out of existence is impossible. Where they have existed for years they can not be merely displaced; they must be replaced if they are to be removed. The fraternity question is only a comparatively minor feature. The major one is the proper provision for an administration of the social life of the student body and the social objectives of secondary education.

The substitution of legitimate activities has done much to help eradicate the high-school fraternity, especially where the school board rules that a member of a high-school secret organization can not take part in any school activity, such as athletics, debating, dramatics, and the like. If such ruling is not made, all these activities are usually dominated by the selfish interests of the fraternities, so that they do not ~~as~~ as a substitute but simply give the fraternities greater opportunity to secure more honor for their members.

HONOR SOCIETIES.

For some years various local honor societies have existed in some of the high schools of the country, but only recently has there been any effort made to organize a national secondary school honor society. That there is a place for such a society is the opinion of the many high-school principals who have expressed the conviction that not only the pupils who excel in athletics but the pupils who excel in other activities should receive honors. The first step taken to organize a national high-school honor society was at a meeting of the National Association of Secondary School Principals in Chicago in 1919, when a committee was appointed to formulate rules and regulations for the organization of an honor society. After making a careful study of various local honor societies, and after considering the numerous suggestions of high-school principals in all parts of the country, the committee presented a constitution which was adopted at the meeting of secondary-school principals in Atlantic City in 1921.

Among the ideals of the founders of this society are: (1) To make a democratic society which shall recognize those finer qualities of kindness and unselfishness which should be encouraged in all high-school students; (2) to make clear that character and moral attitude is the very highest quality in the development of youth; (3) to recognize the effective and worth-while individual in the activities of school and life; and (4) to emphasize good scholarship that it may always stand out as a basis and foundation for distinction and achievement.

The following are the steps to be taken in each high school for the selection of candidates and finally members of the society.

1. The students who constitute the upper quartile in scholarship of the class are first selected as candidates.

2. Out of this quartile each high-school principal shall determine a method of selecting the requisite 15 per cent of the class which the constitution provides for election to membership.

3. In making this selection the qualities of character, initiative, school leadership, and distinguished service to the school form the basis upon which the selection is actually made.

Since the adoption of the National High School Honor Society by the Association of Secondary School Principals more than 50 representative high schools have elected the requisite number from their graduating classes as members of this National High School Honor Society. Only high schools fully accredited by such standardizing agency as the North Central Association of Colleges and Secondary Schools may elect students as members of this society.

THE SMALL HIGH SCHOOL.

Of the total number of public high schools in the United States, a little more than 50 per cent have an enrollment of fewer than 50 pupils. It is evident that these small high schools have their own particular problem of organization, one of which is the small classes, or sections, which predominate. In a survey made of the organization and administration of the high schools in Connecticut it was found that over 22 per cent of the classes had 5 pupils or fewer, that 50 per cent of the classes average from 1 to 10 pupils, and that 80 per cent have fewer than 20 pupils. Similar conditions prevail in New York State, as is shown by the recent school survey. One hundred and eighty-four rural high schools were selected at random, and represented schools of each type on the basis of the number of pupils enrolled. The data for these 184 high schools show that (1) the median class in schools with an enrollment under 50 has 6.8 pupils; (2) the median class in schools with an enrollment between 50 and 99 has 11.6 pupils; and (3) the median class in schools with over 100 pupils has 17.2 pupils. This condition prevails in the small high schools of every State, but in many instances the schools could be so organized that there would be more pupils in a class. The small high school, offering several curriculums or many electives, will necessarily have very small classes. Just how far a high school should go in the matter of offering various curriculums is a question. The State supervisor of secondary education in Connecticut says, regarding the offering of more than one curriculum in the small high school:

We may well question the advisability of offering more than one curriculum in a school of less than 100 pupils. At present many communities feel that

they must maintain the tradition that the high school must serve as a preparatory school for a certain few exclusive colleges. This sentiment is the cause of most of the problems facing the small high school. Such a school should first meet the needs of the majority of the pupils in the community. A single curriculum can be made to serve this purpose with economy and efficiency.

Some high-school principals are solving the problem of extremely small classes by alternating certain subjects, but unfortunately not all principals have their schools so organized that certain subjects may be offered every other year. It is still the practice in some small high schools to teach physics and chemistry the same year when they could be taught every other year just as effectively. The following plan of alternation, suggested by the department of public instruction of Ohio, shows how it is possible to offer a number of subjects in a small high school without multiplying the number of classes. The following suggested arrangement of the curriculum is for use with three teachers:

Offerings for odd years.

FRESHMAN YEAR.

1. English I, R.
2. General science, R.
3. Manual arts (boys), E.
4. Home economics—sewing and cooking (girls), E.
5. Algebra, E.
6. Agriculture, E.
7. Latin I, E.

SOPHOMORE YEAR.

8. English II, R.
- 2c. General science, R.
- 3c. Manual arts (boys), E.
- 4c. Home economics—sewing and cooking (girls), E.
- 5c. Algebra, E.
- 6c. Agriculture, E.
9. Latin II, E.
10. Ancient and early European history, E. (to end of seventeenth century).

Offerings for even years.

FRESHMAN YEAR.

1. English I, R.
2. Occupations, $\frac{1}{2}$ (boys), R.
- 3c. Home sanitation and hygiene, $\frac{1}{2}$ (girls), R.
- 2a. Community civics, $\frac{1}{2}$ R.
4. Biology, E.
5. Latin I, E.
6. Business practice and commercial arithmetic, E, or bookkeeping, E.

SOPHOMORE YEAR.

7. English II, R.
- 2c. Occupations, $\frac{1}{2}$ (boys), R.
3. Home sanitation and hygiene, $\frac{1}{2}$ (girls), R.
- 2sc. Community civics, $\frac{1}{2}$ R.
- 4c. Biology, E.
8. Latin II, E.
- 6c. Business practice and commercial arithmetic or bookkeeping, E.
9. Plane geometry, E.
10. Advanced home economics, E.
11. Ancient and early European history, E.

*Offerings for odd years--Continued.**Offerings for even years--Continued.*

JUNIOR YEAR.

- 11. English III, R.
- 12. American history $\frac{1}{2}$, R.
- 12s. Problems of American democracy or civics, $\frac{1}{2}$, R.
- 13. Physics, E.
- 14. Advanced agriculture, E.
- 15. Advanced manual arts, E.
- 16. Foreign language I, E.
- 17. Advanced algebra, $\frac{1}{2}$, E.
- 17s. Solid geometry, $\frac{1}{2}$, E.

JUNIOR YEAR.

- 12. English IV, R.
- 13. Modern European history, R.
- 9c. Plane geometry, E.
- 10c. Advanced home economics, E.
- 14. Chemistry, E.
- 15. Foreign language, E.
- 16. Commercial subjects, E.
- 17. Economics or American government, $\frac{1}{2}$, E.
- 17s. Social problems, $\frac{1}{2}$, E.

SENIOR YEAR.

- 11c. English III, R.
- 12c. American history, $\frac{1}{2}$, R.
- 12sc. Problems of American democracy or civics, $\frac{1}{2}$, R.
- 13c. Physics, E.
- 14c. Advanced agriculture, E.
- 15c. Advanced manual arts, E.
- 17c. Advanced algebra, $\frac{1}{2}$, E.
- 17sc. Solid geometry, $\frac{1}{2}$, E.
- 18. Foreign language II, E.

SENIOR YEAR.

- 12c. English IV, R.
- 13c. Modern European history, R.
- 14c. Chemistry, E.
- 16c. Commercial subjects, E.
- 17c. Economics or American government, $\frac{1}{2}$, E.
- 17sc. Social problems, $\frac{1}{2}$, E.
- 18. Foreign language, E.

From the foregoing it will be noted that exactly the time of three teachers is called for in both odd and even years, since 18 different units of subject matter are presented in each. The letter "c" indicates a subject in which a class is combined with the preceding class which bears the same number, as 2c with 2, etc. Subjects marked 2 and 2s, for instance, are subjects which extend only over a semester and can both be taught by the same teacher, since one follows the other.

In following the pupils' progress through high school it is necessary to treat the above schedule as a checkerboard and move diagonally. A pupil who enters high school in any odd year such as the present one, 1923, will take the freshman subjects inclosed in the ruled square. Moving diagonally, his sophomore subjects will be the ones inside the quadrangle; diagonally again, and we find his junior program within the ruled lines; so likewise is his senior work within the ruled lines. A freshman who starts his work in any even year, as 1922, will follow the subjects outlined in the open sections above. Starting in the upper right-hand section, his course moves diagonally to the left, then to the right, and finally to the left (diagonally in each case).

The problem of the program of studies in the small high school is one of great concern to many State high-school inspectors. They realize that the high school should not have as its main object the preparation of pupils for college, since only a comparatively few of those entering high school go to college, and that possibly more boys and girls would remain in high school if it offered a program of studies not entirely college preparatory in content.

That preparation for college has been the chief object in many small schools is only too evident. Then, too, greater emphasis is placed upon the older or more traditional subjects, as Latin and mathematics, rather than upon many of the newer subjects for which many colleges give credit. These facts were brought out in the study of the rural high schools of New York by the school survey committee, which says:

The study of the curriculum content of the rural high schools shows that it is designed primarily to prepare pupils for college. Its program of studies, in the main, contains only the older, more traditional, college preparatory subjects and only in a small degree the newer college preparatory subjects.

What is said of the small high school in New York can without doubt be said of this type of school in most other States.

In some sections of the more densely populated States some of the small high schools could well be consolidated. In a certain county, where the township and borough system of administration obtains, there are four high schools within less than a 3-mile radius, one is in a city with a high-school enrollment of 600, another in a township with a high-school enrollment of about 300, and the other two are very small three-year high schools in two little towns. These two should be abandoned and the tuition of the children paid to one or the other high schools, or the school district should be made such as to include these smaller towns, one of which is adjacent to the city in question and the other was once a part of the township in which the township high school is located.

In many States there are schools with one or two teachers who are attempting to do not only elementary school work but also one or two years of high-school work. One State high-school inspector points out that in some counties in his State there are many such schools, and that the solution is consolidation, so that the children may have the advantage of a real high school.

In States having the township or district school system the best plan is to permit the union of two or more townships or districts for high-school purposes. Several States have had legislation to this effect, and others have recently enacted such legislation. In States where the county unit of school administration obtains there should be less difficulty in the matter of consolidating the schools, so that

there may be several standard high schools instead of a weak high school in nearly every neighborhood.

In place of the two or three-year high school in each neighborhood the junior high school would, in some instances, be much more desirable, as is pointed out in the section on junior high schools of this report.

THE JUNIOR HIGH SCHOOL.

The junior high school was for many years a mere conception. Finally it became a reality in a few school systems, but in some without very clearly defined aims. Today junior high schools are numbered by the hundreds. Five hundred and seventy-five cities having a population of 2,500 and over report such schools. If all cities having such schools had reported, there would without doubt be several hundred more to add to the list. Just how many there are in places of less than 2,500 population is not known, but there are at least several hundred. Some schools called junior high schools should not be so classed. For instance, one city reporting junior high schools has such schools only in name. The superintendent in that city says that unfortunately the name "junior high school" was attached to the departmentalized seventh and eighth grades before the aims of the junior high school were clearly defined.

Even if some schools claiming to be junior high schools can not be so classified, the development of the junior high school within the past two or three years has been remarkable. For instance, there were in Pennsylvania, in 1922, 52 such schools that could be classified as real junior high schools, 25 of them being in cities, 13 in small towns or boroughs, and 14 in the rural districts. During the year 1922-23, 54 more are to be opened, 12 in cities, 21 in small towns or boroughs, and 21 in the rural districts. From these figures it is seen that in Pennsylvania in 1922-23 there are 37 junior high schools in operation in the cities of the State, 34 in the towns, and 35 in the rural communities, or a total of 106, with an approximate enrollment of 60,000 pupils. Practically all the increase in the number of junior high schools in Pennsylvania has come about within the last two or three years. Other examples of like nature could be given to show the almost phenomenal growth of this type of school.

In some States the development of the junior high school has been slow owing to the fact that legislation is needed before the junior high school can become a part of the school system, the school laws recognizing only eight elementary grades and four high-school grades. Some States have enacted legislation recognizing the junior high school. Among these States are Alabama, California, Florida,

Indiana, Michigan, New Hampshire, Ohio, West Virginia, and Wisconsin.

In some States legislation is not necessary, since the State departments or the local school boards have power to organize the schools in such a way as to permit of the establishment of junior high schools.

The junior high school is far beyond the experimental stage, in so far as the value of such schools is concerned. In no case, so far as the records of this bureau show, has any real junior high school been considered a failure. The reports are all in favor of such schools. Many school superintendents who have organized one or two such schools are planning to organize more, and many of those who have not organized junior high schools are planning to do so at the earliest possible moment. Such schools can not be organized in a day. New buildings have to be erected or old ones remodeled. Instance after instance could be cited where superintendents are planning a building program to provide for junior high schools.

In brief, the junior high school is here and it is here to stay. No one who has given the subject any thought would advocate a return to the traditional plan of organization. That the junior high school is as yet by no means a perfect school the most ardent advocates admit. There are still many problems to solve, but with the intensive study that is now applied to the junior high school there can be no question regarding the solution of these problems.

Many schools of education are studying the junior high school and offering suggestions for its improvement. State departments of education are also giving much thought to the junior high school organization, and several have prepared suggestive programs of studies and have made recommendations regarding it. The Pennsylvania State department of education has organized a junior high school bureau whose scope of work is the organization of junior high schools in communities varying in size from the largest city to the small rural organization of three or four teachers; the classification of junior high schools in all systems is also one of the functions of that bureau. The junior high school director gives much time to the work of acquainting superintendents, principals, teachers, members of boards of education, and the community with the purposes of the junior high school and its organization. The bureau also serves as a clearing house for the experience of junior high schools in various sections of the State. Without doubt, a bureau in each State department of education would greatly assist in solving the problems confronting the junior high school.

ORGANIZATION.

The usual junior high-school organization includes grades 7, 8, and 9. There are some, however, which include grades 6, 7, and 8, and a few, grades 7, 8, 9, and 10. There are also other variations. In some instances, the junior high school is combined with the senior high school, making a six-year organization. This plan of organization is, however, recommended only for the smaller communities, rural consolidated school districts, villages, and the smaller cities.

The Pennsylvania State department of public instruction says, regarding the organization of the junior high school:

1. These grades (7, 8, and 9) may be segregated as a distinct school unit where practicable.
2. These grades be included with the tenth, eleventh, and twelfth years, forming thereby a six-year secondary school unit. This type of organization may be advisable for smaller cities, boroughs, and larger rural communities because of the economy of administration and reciprocal gains to both junior and senior units. These gains arise by reason of the increased total enrollment and the greater flexibility consequent to a larger organization.
3. Grades 7-10 may be classified as a junior high school, provided the conversion of an existing second or third class high school into a junior high school is dependent upon this type of organization, and provided also, that in each case clear evidence is presented to the department of the necessity of including the tenth year.

THE PROGRAM OF STUDIES.

The program of studies of the junior high school is in a constant state of revision. At first when the aims of the junior high school were not as clearly defined as they are now there was but little attempt to reorganize the program of studies. Possibly a foreign language and algebra and a few other subjects were offered as electives, but the required subjects were practically the same in content as those of the old seventh and eighth grades. Now the aim is to make a survey of the chief departments of human knowledge. The work of the junior high-school period, then, can well comprise courses in English literature, general social science, general mathematics, general science, foreign languages for those desiring such, music, art, physical education, and the practical arts. By pursuing such courses a pupil has landmarks of the chief fields of knowledge established, which serve to orient him. Such a survey, extensive and popular, is better adapted to the adolescent than an intensive and narrow scholarly course, for children 12 to 15 years of age generally demand change, variety, and human interest rather than completeness and logical arrangement. It is now pretty well agreed that courses of study planned to give a general survey are much better than the traditional seventh and eighth grade courses for those who do not continue in school after

the ninth grade, and that for those who remain throughout the senior high school such general courses give the best introduction to the more intensive work of the senior high school.

The subcommittee on junior high schools, in its report made to the National Council of Education in 1922, said regarding the junior high-school program of studies:

The junior high-school program of studies should be a resultant of several forces. It should be made up, in part, of a continuation of the elementary-school curriculum, but a review of these courses, i. e., a new view through articulation of elementary and secondary courses; in part, a preview of secondary school courses of study, but a rearrangement of such courses in their simpler aspects, deferring the refinements to later senior high-school grades; in part, a prevocational content from the industrial and commercial fields; and, finally, a liberal amount of social science methods and social and civic activities to the end of giving to the early adolescent a "self-conscious adjustment."

The tendency is to adopt the single curriculum with constants and variables and to make the work uniform in the seventh grade and especially in the low seventh. The seventh grade should be a period of adjustment to a new school organization and to a new type of school. The subcommittee on junior high schools in its report says, regarding electives in the low seventh grade:

It would seem wise, therefore, to subject him (the adolescent of 12 years of age), during this first semester, to as little change as possible in his program of studies. Such change as is advisable should be restricted to the inevitable modification in the courses of study which are consequent to enlarge school facilities and departmentalization. There should be no change in the program of studies occasioned by the introduction of electives. * * *

In the latter half of the decade of actual operation of the junior high school there has been a marked tendency to defer electives from the middle of the seventh year to the beginning, and at present in a less degree to the middle, of the eighth year. This tendency has been largely due * * * to a growing appreciation of the fact that one predominant objective of the junior high school is the exploration of individual differences, and of the fact that discovery of aptitude must precede even provisional electives. Part of the time previously given to electives has gradually been surrendered to general courses for exploration and preview. It is pertinent to add that this development makes a very large contribution to the realization of the chief mission of the junior high school to the public-school system as the unit of transition.

QUALIFYING TEACHERS FOR JUNIOR HIGH SCHOOLS.

One of the big problems at present in the administration of the junior high school is that of finding teachers qualified for this new type of school. The seventh and eighth grade teachers being accustomed to reviewing the work of the elementary schools and having but little forward look either as to the child's success in high school or out are evidently not fully prepared by experience to teach the junior high-school subjects. Neither are the regular high-school

teachers, as a rule, prepared either by training or experience for junior high-school work, since they use methods of teaching entirely unsuited to boys and girls 12 to 15 years of age. Their work is a more specialized one than that of the junior high school. Even if they were prepared to teach junior high-school subjects, it would be impossible to find a sufficient number, since the regular high school is itself demanding better qualified teachers. The colleges have not yet begun to graduate many persons who have made a study of the aims and methods of the junior high school. Therefore, the only practicable thing to do is to select the best prepared teachers in the seventh and eighth grades for the junior high school, but even these should not be taken over into the new organization until they have met all the requirements. If qualified teachers can not be found, the feasible thing for a community to do is to delay the organization of a junior high school until such teachers can be obtained. One reason why some school superintendents have been slow to introduce the junior high school is because they realize that it would be a failure without teachers who know its aims and methods.

In a study made by T. W. Gosling, formerly supervisor of secondary education of Wisconsin, he arrives at the conclusion that the best plan in securing junior high-school teachers is to select them from groups of successful elementary-school teachers, saying:⁸

Both theory and experience indicate the desirability of making the first appointments to newly organized junior high schools from groups of successful elementary-school teachers. These teachers, especially if they are selected from the seventh and eighth grades, will have the initial advantage, a very considerable advantage, of having dealt with pupils who are of junior high-school age. They will know at first hand some of the problems which they will meet in the new organization. Furthermore, elementary teachers as a group are more likely than senior high-school teachers to have had training in pedagogical methods and in the history of education. Training of this kind will be of inestimable value to the members of a junior high-school staff. If to these qualities of successful experience and of pedagogical training can be added those other qualities which come from adequate scholastic preparation in college and university, from the youthful spirit, and from natural or cultivated social vision, we shall have almost ideal fitness for junior high-school work. The senior high school, too, sometimes has in its corps a teacher who possesses all the qualities we have mentioned. The best senior high schools have many such teachers. When the conditions are right both the senior high school and the elementary school should be called upon to assign the members of their staff to places where they can do the most good. Fortunately, some school systems, especially in the larger cities, are able to find among the teachers already in service a sufficient number with the necessary qualifications to fill the new positions in their junior high-school organization.

In many small communities, however, and in some large cities where the standards of appointment have not brought teachers of high endowments into the elementary schools, the problem of making the first appointments to

⁸ Eighteenth Yearbook of the National Society for the Study of Education.

the junior high school will be more difficult. It is scarcely worth while to undertake the task of organizing the junior high school, with all of its complex problems, unless the teachers who are to be selected for the work show some promise of grasping the meaning of their new responsibilities and unless they possess some ability to measure up to their new obligations. Native ability, especially if it be easily adaptable to new conditions, sometimes may be accepted as a substitute for specific training. Each superintendent who plans to establish a junior high school will do well to consider the availability for appointment of the teachers who are already doing work in the upper grades, especially in the seventh and eighth grades. Unless he can find promising, even if untrained, material in this group, he most likely will do well to postpone the institution of his plan to a more favorable time.

A plan adopted in several cities is to provide special courses in junior high-school methods for those teachers who wish to qualify for junior high-school positions. In Boston a progressive series of courses for grades 7, 8, and 9 began in 1917. Since that time 110 high-school teachers and 1,520 elementary and intermediate teachers have availed themselves of the instruction offered in these courses. During the year 1921-22 six improvement courses were offered. Attendance was limited to teachers or prospective teachers of grades 7, 8, and 9.

In Washington, D. C., teachers may qualify for junior high-school work by attending summer courses given by the best instructors available under the auspices of the board of education.

Courses were offered for the first time during the summer of 1922 with a good attendance. It is expected as a result of these courses that enough teachers in the school system of the District of Columbia will qualify to fill any positions that may become vacant in the two junior high schools. It is expected also that more of the seventh and eighth grade teachers will avail themselves of the courses offered by the board of education so that they will be eligible for appointment by the time additional junior high schools may be opened.

Evidently some such plan as that adopted in Boston and the District of Columbia is at present the only solution of the problem of securing qualified junior high-school teachers.

JUNIOR HIGH-SCHOOL HOUSING AND EQUIPMENT.

The junior high-school building should be built around the program of studies. If it is not, the junior high school may prove a failure. Indeed, many schools called junior high schools are not living up to the name from the fact that they are housed in buildings that do not permit the introduction of a junior high-school program of studies. The old type of building, with a seat for each child that no other child may use and with nothing but classrooms for academic subjects, does not meet the requirements. There must be, in addition to regular classrooms, about an equal number of special rooms, such

as shops of various kinds, a library, science laboratories, a gymnasium, an auditorium, and a playground. The State superintendent of public instruction of Oregon says, regarding the building and equipment of junior high schools:⁹

The building and equipment of the junior high school should be little inferior, if any, to that of the senior high school. It has been the practice in American public schools to erect large and beautiful high schools for the minority who continue through them and to house the larger number of students in the upper grades—most of whom are at the age of educational crisis and many of whom are receiving the last they shall ever receive in the way of school training—in buildings designed and equipped for elementary education [which, as a rule, the State superintendent might have added, are poorly designed for elementary education]. Socializing activities and exercises have been all but impossible for the want of an auditorium. Textbook teaching has been relied upon as a sole means of education because of the lack of means of visual education and inadequacy of library facilities. Science instruction has been confined to reading material and manual training; household arts have been taught under discouraging circumstances. These conditions can not continue to obtain if we are to have genuine junior high schools.

The Pennsylvania State department of public instruction recommends that in addition to classrooms and home rooms that there be included facilities for industrial arts or agriculture, home economics, an auditorium, a gymnasium, and a library; but that where equipment facilities in the smaller schools are lacking for industrial arts, agriculture, and home economics, the organization should not be delayed for this reason, provided a room for industrial arts or agriculture and a room for cooking and sewing are available, since instruction in these branches may temporarily be restricted, if local conditions necessitate, to an informational character with practical applications carried out at home or by junior projects out of school. The Pennsylvania State department also suggests that where an auditorium and a gymnasium can not be provided two or more adjoining rooms, by means of movable seats, be opened together for assembly, playroom, and gymnasium; and that in buildings where neither the auditorium nor the gymnasium can be provided the auditorium floors be level and equipped with movable seats, so that the auditorium may be easily and quickly converted into a playroom or a gymnasium. The Commission on the Reorganization of Secondary Education also calls attention to the fact that a single large room in the small high schools may serve as a gymnasium and auditorium, saying:¹⁰

The superiority of one large room for both gymnasium and auditorium over two smaller rooms is readily understood. A small gymnasium is of little value and an auditorium with a capacity of less than 500 is limited as to service.

⁹ Course of Study for Junior High Schools of Oregon.

¹⁰ U. S. Bureau of Education, Bulletin, 1922; No. 23.

Detroit may be given as an example of a city that has worked out a junior high-school building program to meet all the needs of a modern junior high-school program. The matter of buildings was not left entirely to the architects to plan, but in planning the details of the various instructional and noninstructional rooms educational specifications were furnished by the various departments of instruction concerned. These were incorporated into the plans of the architects and engineers and checked therein by the departments of instruction, so that the buildings as to their instructional features represent the best ideas of all the departments of instruction in the city.

The junior high-school plans of Detroit are so devised that the buildings can be built as a unit to house 1,200, 1,500, or 1,800 pupils. A building to accommodate 1,800 pupils has 26 classrooms, each of which accommodates 35 pupils. The 26 rooms, therefore, accommodate one-half the school. The special facility rooms accommodate the other half.

It is generally agreed that the junior high school should be housed in a building of its own. This plan, however, is not always the most practical one, or at least not in the small cities where one building for both the junior and senior high school or even for all the grades from the kindergarten up is the most practicable. If the total enrollment for all the grades in a small city is 1,000, there would be approximately 190 in the seventh, eighth, and ninth grades and 65 in the tenth, eleventh, and twelfth grades. It is at once evident that it would be very uneconomical to have two separate buildings for each group. In fact, it would be uneconomical to have more than one building for all the children, especially if the elementary-school children are to have the advantages of playrooms and other special facilities, as they should have. In the small city, enrolling only a few hundred or even 1,000 children, all of them from the first grade up could use the special facilities, while with more than one building it would be impossible to provide special rooms in each building because of the cost.

In practice 37 per cent of 199 cities between 2,500 and 25,000 population have the junior high school housed in a separate building, 33 per cent in the senior high-school building, and 30 per cent in an elementary-school building.

In the larger cities the plan of having a separate junior high-school building is general. In those cities the senior high schools are large and it would be impracticable and unwise to have the junior high-school pupils in the building with them. On the other hand, there are usually not enough children of junior high-school age in any of the elementary-school buildings to justify the organization of a junior high school in these buildings. Thus it would

appear, as a rule, that the best plan for the large city is to erect separate junior high-school buildings, just as Detroit and many other large cities are doing.

JUNIOR HIGH SCHOOLS FOR RURAL COMMUNITIES.

The junior high-school movement is by no means confined to cities. Already many rural and village communities have successfully organized such schools. There can be no question regarding the desirability of organizing junior high schools in rural and village communities, since they will help solve several problems, one of which is the problem of small one and two year high schools. The county superintendent of Allegheny County, Pa., says in regard to this matter:¹¹

The conversion of such schools (second and third class high schools) into first-class junior high schools will not only bring school facilities up to date in the districts where these schools linger but wherever established the junior high school will also tend to relieve the crowding of neighboring senior high schools.

If junior high schools were scattered throughout a county they could act as "feeders" to one or two senior high schools. Several State high-school inspectors report that this is the plan adopted in their States. The State high-school inspector of Georgia makes the following recommendation regarding the establishment of rural junior high schools in that State:

There should be located in different parts of the county high schools offering two and three year high-school courses embracing the eighth and ninth grades or the eighth, ninth, and tenth, on the 7-2 or 7-3 plan. Whenever advisable, the junior plan of organization may be adopted and the 6-3 or the 6-4 plan may be used. The latter schools would include the seventh, eighth, and ninth grades or the seventh, eighth, ninth, and tenth. In some cases the sixth grade may be added to these schools, especially the overage pupils of this grade. Schools of this type should include all the elementary grades supported by pupils from the immediate territory. These schools when thus organized should require the whole time of one teacher of high-school subjects or time of one and a half or two teachers if the work is continued through the tenth grade.

These junior high schools should receive pupils from a half dozen one or two teacher schools, transportation being furnished in case of pupils living too far to walk.

The number of these schools should be determined by the high-school population, by the accessibility of the school, and also by the ability of the community to support and equip. The number of these schools may be increased as the population and financial conditions justify. Pupils upon the completion of two or three year high schools should enter creditably the central senior high school of the county, and continue their studies through the eleventh grade. These schools may be organized on the 7-4 or the 6-3-2 plan. The lower grades of this school should be open to all the pupils of the ele-

¹¹ School Report of Allegheny County, 1921-22.

mentary grades in the immediate territory and the upper grades to pupils from all parts of the county. Transportation by means of a truck or else a small per diem of 10 to 20 cents per day should be furnished by the county authorities.¹

The average county is not able to support more than one or two well-equipped high schools. It is better, therefore, to have one strong, well-equipped school of this kind receiving its pupils from all parts of the county than a larger number poorly equipped and attempting the impossible. The county superintendent, with the aid and assistance of the principal of the senior high school, should supervise all the high schools under his jurisdiction, advising at times with the State high-school supervisor in reference thereto. Meetings should be called from time to time of the high-school teachers of the county in order to bring about proper articulation and correlation of the schools of the county. There should be occasionally uniform tests prepared for the schools. There should also be uniform loose-leaf records of each pupil in the high school of the county, these to be deposited at the end of the term with the county superintendent. As far as possible uniform textbooks should be used in each county. The result of the organization should be, instead of an independent number of isolated schools in each county, a well-organized system of interrelated schools.

The State department of public instruction of Wisconsin makes a similar recommendation, saying:¹²

The junior high-school movement ought to be of even greater value to rural districts than it is to cities. The next development in organization should reach out into the rural districts and provide junior high-school facilities in those sections where it is not yet advisable to establish the junior high school. By a consolidation of schools it would be possible to develop a fine type of junior high school in the open country. When public sentiment awakens to the importance of consolidation the rural junior high school will offer an excellent type of organization. If the consolidation includes a sufficient amount of territory and of population, the six-year secondary school will be recommended.

The rural school-survey committee of New York says that the organization of secondary education with the junior high school as the first unit should be of great value to that State; that it is suited particularly to offer the rural pupil the opportunity of richer and more varied subject matter two years earlier than is at present possible; that it should bring closer together the elementary school and the high school and operate to reduce the elimination of rural pupils before reaching the high school; that it should make high-school education more available to rural pupils in many communities by permitting the organization of a junior high school where the community is too small to maintain a four-year high school; and that in these smaller communities it would bring together a body of pupils large enough to make possible a better corps of teachers.

¹² Educational Progress in Wisconsin. Report of the State Department of Public Instruction of Wisconsin, 1921.

CHAPTER XIII.

VOCATIONAL EDUCATION.

By WILLIAM T. BAWDEN,

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CONTENTS.—Increased popular interest—Relation of vocational education to general education—Important factors of progress—Federal Board for Vocational Education—The part time school—Business and industry assume a share of responsibility—Industrial teachers' scholarships—The literature of vocational education—Prevocational education—Vocational guidance—Validity of Federal aid legislation assailed—Vocational education in the Army and the Navy—Correspondence schools—Manual arts instruction.

INCREASED POPULAR INTEREST.

During the two-year period there has been a notable increase in the amount of attention given to the subject of vocational education on the part of the general public as well as by educators. There has been much debate among educators over the respective merits and functions of vocational education and general education. Notwithstanding the reams of paper and almost unlimited time which have been consumed in this discussion, there still are educational leaders who appear to regard vocational education and general education as two mutually exclusive horns of a dilemma, and to feel impelled by the exigencies of the situation to range themselves on one side or the other of what they deem to be a controversy over fundamental policies.

Of even greater significance, perhaps, is the extent of the interest taken by the general public. A large number of articles have appeared in magazines of all classes, including those of literary and scientific leanings, and even some of highly specialized outlook, as well as many of the more popular periodicals. Even the daily press has given unwonted attention to questions formerly regarded as too technical to be of interest to the general reader, and much editorial advice has been made available.

One serious defect in much of this general popular discussion of vocational education is that it has been uninformed and superficial. It has too frequently been based on undigested fragments of pedagogical argumentation rather than on first-hand study and grasp of the issues involved. The real estate promoter may be excused for

referring to a junior high school manual arts department as a "trade school," and to handwork in the elementary grades as "vocational courses," and for listing them as such among the assets of a community, but the magazine writer or newspaper editor who essays a discussion of public education on this basis shows clearly his incompetence for the task.

MEANING OF THE TERM "VOCATIONAL EDUCATION."

Unfortunately, educators are themselves in part responsible for the existing confusion, because of the loose way in which the term "vocational" has been used. The enactment of the Smith-Hughes vocational education law of February 23, 1917, established certain standards and tended to fix the definitions of certain types of educational activities, but not even five years of experience under this legislation have served to bring about general agreement as to the meaning of essential terms.

There appears to be abundant evidence to show that manual training or manual arts instruction, far from being rendered obsolete or superfluous by the development of vocational education programs, has become more firmly entrenched as a feature of elementary and secondary education. During the transition period some boards of education have changed the designation of their "manual training" classes to "vocational" classes, and have sought thus to secure to their pupils the benefits of the new education. Application of the standards set up by the Smith-Hughes law, however, shows that certain of the avowed objectives can not be realized under the usual public-school limitations in regard to time, equipment, and qualifications of teachers. In many places this has led to a restatement of the objectives of manual arts instruction and to readjustment of the time schedule and other conditions.

While there still exists in many quarters some confusion as to the basis of distinction, certain principles are gradually emerging which should be of substantial assistance to boards of education and school officials who desire to formulate a consistent and practical program.

The existence of the right type of manual training courses affords to vocational education courses an auspicious start and prevents much undesirable waste of time and effort in the strictly vocational work.¹

A representative of the Smith Hughes type of training suggests a distinction based on function, substantially as follows:

The function of vocational education is, obviously, to train skilled workers in a definite occupation. This should parallel the general education, so that while the student is receiving a degree of general education for the business

¹ Hummel, W. G. The relation of manual training to vocational education. *Indus. Arts Mag.*, IX, pp. 371-372, September, 1920.

of living with his fellows, he is also acquiring the skills, speeds, and habits of thought needed for success in the trade or occupation studied.

The functions of manual training are more general in character. It should give some skill in the use of tools, and include such information, experience, and skills as are applicable to home needs, but particularly it should aim to give a wide view of the industrial world, to develop social adaptiveness, to point the way to different vocations, and to assist in the intelligent choice of a life work.*

Difficulties in interpretation have arisen in part because leaders of the vocational education movement have deemed it necessary to outline their proposals in bold relief, and to emphasize the distinctive features of their program. Vocational education has made headway largely because of definite objectives and specific methods. But there is a stage of development beyond which it may be well to turn from dwelling upon those features which differentiate vocational education from other education, and to devote some effort to promoting understanding of true relationships.

EDUCATION A UNIFIED PROCESS.

No satisfactory philosophy of education can be built up except upon a basis which recognizes education as a unified process or experience. Public education is essentially a formal attempt to supplement the measures employed by the home and the individual to prepare children and youth for the duties and experiences of life. Preparation for life to-day necessarily includes preparation for earning an adequate income through some socially acceptable and useful service. Earning an income is not all there is to life. Preparation for earning an income is not all there is to education, even though at certain periods it may occupy the exclusive attention of the individual.

The time may come when we shall know enough to set up a unified educational program which, so far as public responsibility goes, will take the child at 6 or 7 years of age and graduate him at maturity, fully equipped as to sound health, general and special knowledge, social graces, personal ideals, and wage-earning capacity, and ready to live a full and complete life. In the meantime, practical considerations as well as lack of knowledge require us to do the best we can with conditions as they are.

It is idle to criticize vocational education as being narrowly specialized in outlook, materialistic, and neglectful of the finer things of life. Such criticism is based on misapprehension, as will appear from examination of any authoritative statement of objectives, but it should be recognized that conditions would justify a materialistic program.

* Ibid. (paraphrased).

MEETING DEMONSTRABLE NEEDS.

Nothing could be more materialistic than the economic basis for the demand for more and better educational facilities.³

The congressional commission of 1914 had found a condition of vocational unpreparedness for maintaining our agricultural, industrial, and commercial prosperity. * * * If we were to compete with other nations in the world's markets, and even in our home market which is open to the products of foreign labor, our labor must be made vocationally as efficient and skilled as the labor of other nations.

Lack of interest in this phase of national security and welfare may be offered as an explanation by those who are engrossed with other problems considered of equal or greater importance, but such persons are not justified in closing their minds to the representations of those who are determined that something shall be done about it. Practical measures must be devised to meet practical needs.

Again, many critics of vocational education fail to comprehend the significant fact that the vocational education program to-day is concerned chiefly with efforts to remedy deficiencies in the education of young persons who have secured all that they can of what the public school has to offer. The great problem in vocational education to-day and for the immediate future is the training of those who have already gone to work.⁴ Nothing can be more "neglectful of the finer things of life" than the heartless way in which society has acquiesced in the wholesale termination of school advantages and the absorption of millions of immature youth in competitive business and industry without adequate preparation or sympathetic supervision.

It is true that these young people need suggestions concerning the use of their leisure time, civic duties, and social responsibilities, personal growth, and development, and the conservation of their physical health. But the contribution of the public-school system, and especially of the advocates of college and university culture, toward these ends for youth who have been obliged to leave school, has in the past been practically negligible.

In addition, these young people need specific help in understanding and adjusting themselves to the demands of wage-earning employment. According to the 1920 census there are 1,060,858 children 10 to 15 years of age gainfully employed in the United States. The vocational education movement, recognizing all of these classes of needs, with varying emphasis as circumstances dictate, seeks to do something in a constructive way with an inclusive and well-

³ Federal Board for Vocational Education, Fifth Ann. Rep., 1921, pp. 18-19. Washington, D. C., Government Printing Office.

⁴ Prosser, C. A., at the Minneapolis convention. Man. Tr. Mag., XXII, 9, p. 281, Mar., 1921.

rounded program. Differences of opinion as to means and methods are inevitable, but it would appear that criticism of this program on the ground that it is objectionably utilitarian does not come with good grace from those who countenance the current neglect of potential human resources and offer no acceptable alternative.

PUBLICLY SUPPORTED VOCATIONAL EDUCATION NOT A NEW PROPOSAL.

Public schools, supported out of public funds derived from taxation, have been accepted in principle in this country for many years. The several States have enacted compulsory attendance legislation. Beyond the age limits of compulsory school attendance provision is made, at public expense, of educational facilities in high school, normal school, college, and university, carrying the individual student as far as he chooses to go, and as long as he is financially able to continue his studies.

These institutions serve very definitely to prepare men and women for successful careers in their chosen occupations. The list of occupations for which such specific preparation is available at public expense is an extensive one, and includes the law, medicine, surgery, dentistry, pharmacy, nursing, teaching, architecture, and many subdivisions of engineering, commerce, and agriculture, as well as the many branches of service in the Army and the Navy. There has been no noticeable protest against these provisions; nor is there any evidence to show that those who are responsible for the present outcry against vocational education are consistently demanding their curtailment.

Above the age of compulsory attendance, however, the great majority of our boys and girls and youth are not in school, and, as Mr. Cooley points out, education for these—

has never been felt to be a public responsibility except in a doubting, hesitating way, and to an absurdly inadequate degree. The conviction that systematic, comprehensive, adequate educational training of this field at public expense would pay economically, civically, and socially, * * * seems never to have been arrived at.⁵

It is not necessary to base on identical grounds the arguments for publicly supported instruction designed to prepare for the occupations of school-teacher, civil engineer, printer, nurse, or what not. The interests of society are not precisely the same in all occupations. It is conceivable that society may, at some time, consciously and definitely draw distinctions and subsidize the preparation for certain classes of occupations while withholding such aid in other cases. Until such time all who are interested in vocational education may

⁵ Cooley, R. L. Problems of the continuation school. *Indus. Arts. Mag.*, IX, 5, pp. 175-180, May, 1920.

well be encouraged at the substantial progress which is taking place in various phases of the movement.

IMPORTANT FACTORS OF PROGRESS.

The Sixth Annual Report of the Federal Board for Vocational Education includes a review of the five years of activity under the Smith Hughes law of February 23, 1917, and is the most important official source of information concerning recent progress in vocational education.* From this report the following items are taken.

FEDERAL BOARD FOR VOCATIONAL EDUCATION.

The example found in the Federal board membership of providing representation of agricultural, manufacturing, and labor interests has been followed in many of the States, and is receiving increasing recognition year by year. Public education in every phase has become in recent years "more vital and important precisely in proportion as these practical interests have been brought into the account."

The number of State directors and supervisors for vocational education employed under control of State boards has increased from 139 in 1918 to 226 in 1922. The number of schools of all types under approved State plans has increased from 1,741 in 1918 to 4,945 in 1922, and the total enrollment in these schools during the same period has increased from 164,186 to 475,828. See Figure 1.

FINANCIAL SUPPORT OF VOCATIONAL EDUCATION LARGELY A STATE AND LOCAL MATTER.

The report shows the proportions of the funds for vocational education which come from Federal, State, and local sources, respectively. A summary of the figures by years is given in Table 1.

TABLE 1.—*Expenditures of Federal, State, and local money under Smith-Hughes Act, by years.*

EXPENDITURES FOR ALL TYPES OF VOCATIONAL SCHOOLS, NOT INCLUDING TEACHER-TRAINING INSTITUTIONS.

Year.	Total amount.	From Federal money.		From State money.		From local money.	
		Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
Grand total.....	\$36,531,522	\$8,764,689	24.0	\$10,725,318	29.4	\$17,041,514	46.6
1922.....	12,554,294	2,854,046	22.7	3,594,285	28.6	6,105,962	48.6
1921.....	10,507,197	2,391,088	22.8	3,122,828	29.7	4,993,280	47.5
1920.....	6,888,501	1,745,299	25.3	2,008,305	29.2	3,134,897	45.5
1919.....	3,970,607	1,135,823	28.6	1,166,405	29.4	1,668,378	42.0
1918.....	2,610,921	638,430	24.5	833,493	31.9	1,138,997	43.6

* Sixth annual report to Congress, Federal Board for Vocational Education, 1922, pp. x + 405. Government Printing Office, Washington, D. C.

* Ibid., p. 13, Table 2.

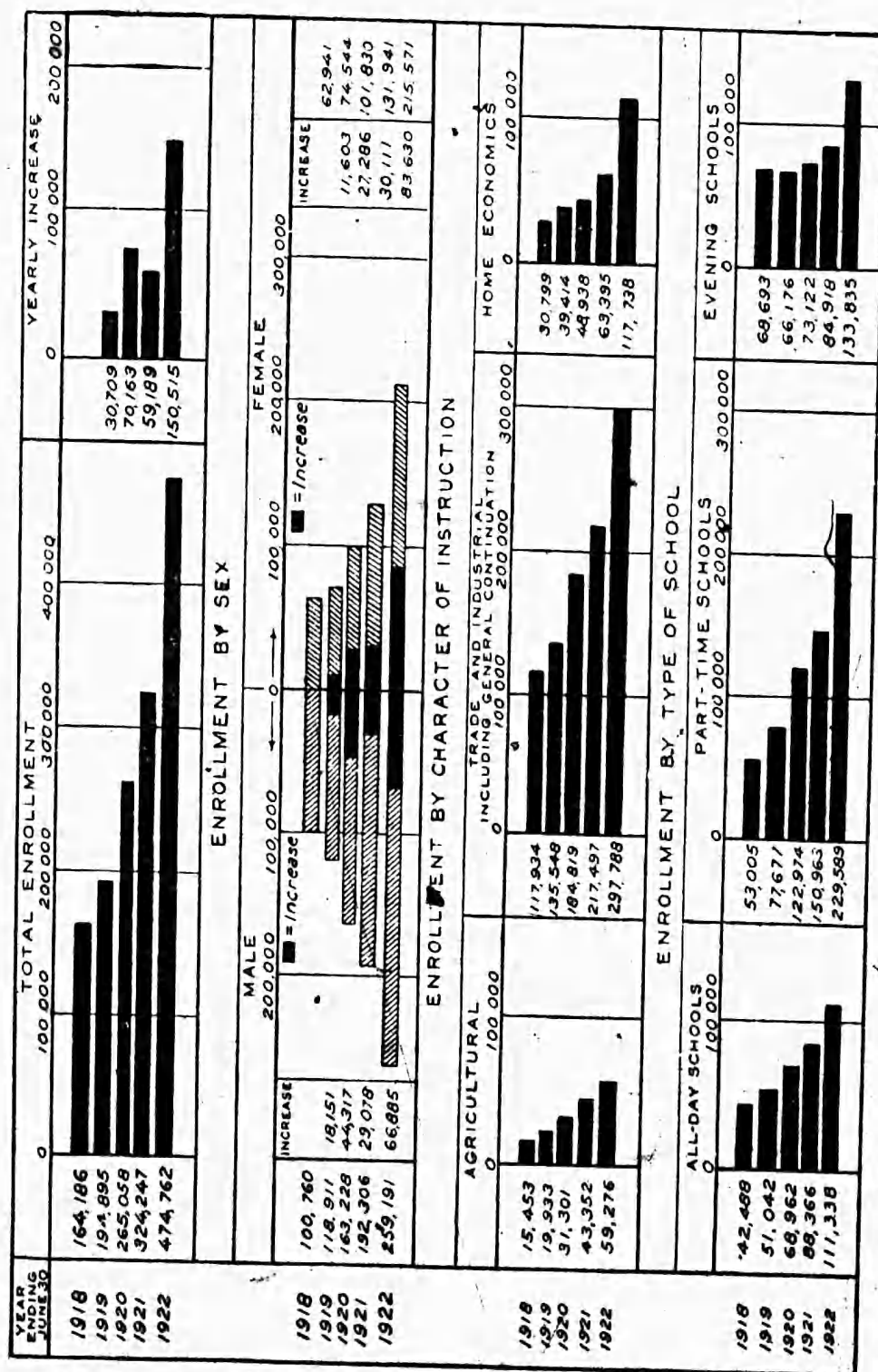


FIGURE 1.—Enrollment in Federally aided schools, 1918-1922. (By permission of Federal Board for Vocational Education.)

EXPENDITURES FOR TEACHER-TRAINING INSTITUTIONS.

Grand total	\$7,563,674	\$3,307,372	43.0	\$3,114,903	42.2	\$941,398	12.8
1922	2,215,818	1,000,523	45.2	919,862	41.5	295,062	13.4
1921	2,111,165	966,505	45.8	851,671	40.1	192,987	9.1
1920	1,605,662	731,203	44.4	661,979	40.2	253,179	15.4
1919	981,169	424,184	43.2	400,221	40.8	156,762	16.0
1918	408,829	184,954	45.2	181,168	44.3	42,706	10.4

Exclusive of funds devoted to teacher training, the proportion of the aggregate expenditures under the Smith-Hughes law which comes from Federal money has been decreasing since 1919, until in 1922 it was 22.7 per cent. The proportion which comes from local money, on the other hand, has been gradually increasing, until in 1922 it was nearly one-half of the total, 48.6 per cent. Of the grand total of \$36,531,522 expended during the five-year period, more than three-fourths, 76 per cent, have been expended out of State and local funds.

The task of preparing teachers and supervisors is not a local responsibility to the same degree as is the maintenance of vocational schools and classes, and hence the report presents a separate distribution of funds devoted to this end. In this division approximately one-eighth of the aggregate amount has come from local money, 45 per cent from Federal funds, and the remainder from State funds.

CONSISTENT GROWTH REPORTED.

The report recommends that more adequate provision be made for promoting home-making education in the public schools, and that the Federal board be given funds with which to subsidize instruction in commercial-education subjects.

One of the outstanding features of the program for the training of teachers is the fact that practically every State has made arrangements to include practice teaching as part of the training.

Steady growth is reported in all lines of work under the direction of the Federal board, but "the most outstanding feature of the development in the past five years has been the growth of the general continuation school." The three major purposes of this type of school are stated to be (1) better preparation for duties as individual members of society; (2) training for citizenship, adjusted to individual experience and requirements; (3) vocational guidance of the best type, and as much occupational training as circumstances permit.

Foremanship training is recognized as "one of the best promotional devices for advancing the whole program of industrial education," because of the position of influence and responsibility occupied by the foreman in every place of employment.

INDUSTRIAL EDUCATION FOR GIRLS AND WOMEN.

The report gives special attention to problems of trade and industrial education for girls and women.

One woman out of every five in the United States is a wage earner. More than one worker out of every six engaged in mechanical and manufacturing pursuits is a woman, the number of such women being approximately 2,000,000.

The present tendency in women's employment is "away from traditional trades toward manufacturing industries." Because of the large numbers of girls and women employed there is an increasing development of supervisory positions open to qualified women. The purpose of industrial education for girls and women is three-fold: (1) To prepare the girl to enter the field of wage earning; (2) to enable the girl already employed to improve her status; (3) to insure progression or advancement of the individual.

The report lists 58 occupations, in 9 different classifications, for which special vocational courses of instruction were open to women and girls in 1920.

CONFERENCES.

In the experience of the Federal board conferences have been found a very important means of promoting the work of vocational education in the States.

They provide opportunity to present new problems, to exchange experiences, and during the first five years of the administration of the vocational education act have served as training schools where the philosophy of vocational education and the policies in regard to the administration of the vocational education act could be brought to the attention of State administrators and teachers.

IMPORTANT CHANGES IN THE WORK OF THE FEDERAL BOARD.

Lack of space prevents adequate treatment of two important phases of the work of the Federal Board for Vocational Education: Rehabilitation of disabled soldiers, sailors, and marines; and vocational rehabilitation of the civilian disabled.

By the terms of the Sweet Act, approved August 9, 1921, all activities of the Federal board having to do with the rehabilitation of disabled soldiers, sailors, and marines, were transferred to the newly created Veterans' Bureau. The original act providing for this service was approved June 27, 1918. Full accounts of the work are to be found in the Annual Reports of the Federal board for 1920, 1921, and 1922.

The Smith-Sears Act, approved June 2, 1920, provided "for promotion of vocational rehabilitation of persons disabled in industry or otherwise and their return to civil employment," and vested the administration of the act in the Federal Board for Vocational Edu-

cation. No reliable data are available concerning the number of men and women who are vocationally unfit or disabled. "Evidence is, however, conclusive that this body of vocationally unfit is large and that its cost of maintenance is a tremendous social cost." Even more significant "is the fact that the cost is avoidable. * * * As a general proposition, it may be laid down that it costs more to support a disability than to cure it."

THE PART-TIME SCHOOL.

In view of the facts that, as reported by the Federal Board for Vocational Education, 43 States are now maintaining part-time schools of various types for the benefit of young persons who have left public school to go to work, and that 21 States have enacted State-wide mandatory or permissive part-time school laws, it seems advisable to give further attention to these schools.

OBJECTIVES OF THE PART-TIME SCHOOL.

The part-time school is developing rapidly and significantly as an agency of service to gainfully employed youth during that period included between the age after which compulsory attendance at the full-time day school is no longer required and the age at which the youth may profitably enter certain classes of occupations having the qualities of permanency, opportunity for future growth and personal development, and financial regards adequate to the maintenance of American standards of family life. For many youth this period includes the years between the ages of 14 and 18, and the school machinery set up by the laws in the several States applies to varying portions of this period.

It would seem that the part-time school should enlist the sympathetic interest, and is entitled to the earnest support, of every true believer in education, and, above all others, of the public-school man, for at least two compelling reasons:

(1) The part-time school deals almost exclusively with boys and girls who have left the regular public school permanently, with their schooling admittedly incomplete and inadequate. Any agency which can take up this task at the point where the public school has laid it down and carry on even a little further must be regarded as an ally and a reinforcement. There can be no competition between the two unless the regular public school permits the part-time school to become more interesting, more effective, and more genuinely serviceable.

(2) Far from being open to the criticism of narrowness of aim or restriction of outlook, the program of the part-time school is even broader than that of the public day school, certainly broader than that of the traditional school. The part-time school aims not only

to complete the task which has been interrupted by untoward circumstances with which the public school has thus far been unable to cope successfully, but it sets up for itself objectives beyond those which have been formulated by the day school.

It is true that mistakes have been made in the name of the part-time school, and experiments have not all turned out as anticipated. It is believed, however, by those competent to judge that there is no question of the essential soundness of the program, and that most of the difficulties and disappointments thus far experienced can be accounted for on other grounds, such as lack of informed leadership, lack of properly qualified teachers, and lack of facilities.

In order to suggest the obvious tendency of the movement and the soundness of the foundation which is being laid by its leaders it is appropriate to record here the analysis of the objectives of the part-time school suggested by Doctor Myers.* Slightly condensed, they include:

- (1) To increase the proficiency of its pupils in the jobs they now hold, however temporary these jobs may be.
- (2) To help them get into work for which they are fitted, and then to train them for this work so far as school training is necessary.
- (3) To help them obtain from their employment the best training it has to offer.
- (4) To help them protect and improve their health under employment conditions.
- (5) To help them understand and interpret in terms of their jobs some of the more fundamental economic principles underlying industry and business.
- (6) To help them see and assume civic responsibilities.
- (7) To help them form desirable habits of work and of using leisure time.
- (8) To help them develop attitudes of mind toward work, toward employers, toward fellow workers, and toward the community that make for good citizenship.

SPECIAL PROBLEMS OF THE PART-TIME SCHOOL.

(1) The most serious problem is that of the magnitude of the task to be performed. Although the number of youth in part-time schools, as reported by the Federal board, increased from 53,000 in 1918 to 228,000 in 1922, this enrollment is "less than one-tenth of the boys and girls 14 to 17 years of age reported by the census in 1920 as not attending school of any kind."

(2) The variety of individual needs to be met is practically unlimited.

In its ultimate development in our cities, the part-time vocational school classes must become as varied in subject matter taught and supplementary equipment as the commerce, trades, and industries of the communities in which the schools are conducted.

* Myers, G. E. How can we save part-time education? *Voca. Educ. Mag.*, 1, 3, pp. 229-231, Nov., 1922.

Mr. Cooley justifies the demand for more adequate support of the continuation school, as an attempt to solve these problems, on two rather striking grounds:

(a) A very large proportion (estimated at 90 per cent) of the wage-earning jobs open to youth under 18 years of age are undesirable from the standpoint of offering opportunity for personal development and direct preparation for any sort of skilled employment, but—

c I know from practical experience with thousands that when the job is looked up with the school * * * the number of "dead-end" situations is vastly diminished, and the "dead-end" jobs cease to be the very great menace they otherwise constitute.*

(b) The cost of the burden that would be assumed by returning these employed youth to the full-time schools would be prohibitive, and that at the same time the economic contribution to the community made by this group constitutes a special claim to recognition. A report on the weekly earnings of 8,078 persons under 17 years of age employed on work permits in Milwaukee in February, 1920, "shows a weekly earning of \$85,495, or an annual earning of \$4,445,754." To provide this sum, in order to permit these young people to return to full-time school, "would require an investment at 5 per cent of about \$89,000,000," to say nothing of the increased burden on the full-time school system. Furthermore,

the employed people under 18 years of age in any community big enough and live enough to keep its young people at home earn * * * enough money to pay all teachers' wages of all the children in all the full-time schools, public, private, and parochial, elementary, and high, twice over.⁹

* (3) The organization of part-time classes in a small community, or in one having only a limited number of employed minors, presents many special difficulties. Aside from shop facilities made available by the junior high school or some other department, "not much variety of shop instruction can be offered economically in a continuation school of less than 1,000 students."¹⁰

(4) Indifference on the part of employers, school superintendents and teachers, and parents, and the difficulties involved in having all parties convinced and ready to act at the same time have delayed the development of the part-time school. According to the experience in at least one State, it is sometimes easier to secure the cooperation of employers and the workers than it is to arouse the interest of superintendents, teachers, and parents.¹²

⁹ Cooley, R. L. Problems of the continuation school. *Indus. Arts Mag.*, IX, 5, pp. 175-180, May, 1920.

¹⁰ *Ibid.*, p. 177.

¹¹ Evans, Owen D. Functions and organization of an urban continuation school. *Nat. Soc. for Voc. Educ.*, Atlantic City convention, Feb., 1921.

¹² Smith, K. G. Establishing a State program of part-time education. *Man. Tr. Mag.*, XXIII, 4, pp. 107-110, Oct., 1921.

(5) One type of difficulty, inherent in the development of a new enterprise, has had to do with legislation. Here, as elsewhere, experience shows that conditions in the several States vary to such a degree that it is not satisfactory to borrow legislation without exercising the greatest care. And, again, it has not been easy to amend a law in the light of practical experience. "A part-time law which can not be enforced is a failure."

(6) Another serious difficulty, as pointed out by Doctor Myers, is that in some States other laws affecting part-time school pupils have not been adjusted to the part-time educational laws. The remedy suggested is to harmonize the requirements and definitely coordinate the administration of the compulsory school-attendance law, the part-time school law, the child-labor law, and the juvenile-delinquency law. Progress appears to lie in the direction of recognizing by law the period from 6 to 18 years of age as the period of education, and especially as a period of some degree of public responsibility for all children and youth, and the establishment of methods of child accounting which will include periodic reports from "every child whether at home, in an institution, in public or private school, or in employment."¹³

(7) An analysis of reports from 50 or more principals or directors of continuation schools in various parts of the country showed that the most pressing problems in the field of administration of part-time education may be classified as follows:¹⁴

<i>Problems.</i>	<i>Number of times mentioned.</i>
Finding suitable subject matter.....	28
Securing competent teachers.....	21
Gaining the cooperation of parents and employers.....	20
Providing adequate and suitable rooms.....	14
Getting the pupils to cooperate fully.....	11
Maintaining regular attendance.....	10
Financing the new work.....	10
Arranging satisfactory programs.....	8
Providing suitable equipment.....	6

BUSINESS AND INDUSTRY ASSUME A SHARE OF RESPONSIBILITY.

One noteworthy indication of progress is found in the fact that, while educators are realizing more and more clearly that vocational education is much too big a task for the school alone, business and industry are awakening to a sense of their share of responsibility. Employers who give the matter serious consideration perceive that the preparation of properly qualified workers includes certain items

¹³ Myers, G. E. How can we save part-time education? *Voca. Educ. Mag.*, 1, 3, pp. 229-231, Nov., 1922.

¹⁴ MacDonald, D. J. Outstanding administrative problems in part-time education. *Indus. Arts Mag.*, X, 9, pp. 323-328, Sept., 1921.

that can only be secured economically and effectively by the worker "on the job," as well as certain other items for which the schools may legitimately be held responsible.

More and more, business and industry are making this distinction, and preparing to take appropriate action. Charles R. Allen has stated that never before in the history of industrial education has there been such active seeking after information concerning means for improvement of plans for training in industry. For obvious reasons one very effective means is through cooperative effort, and pioneer work is being done by a number of influential trade and industrial organizations.

The extent of the movement in this direction is suggested by Doctor Prosser, who found at least 25 national associations of employers setting up organized systems of training for employees, some of them with endowments ranging from \$2,000,000 to \$10,000,000.¹⁵ A partial list of such associations, gathered from various sources, includes the following:

- United Typothetae of America.
- National Pulp and Paper Association.
- National Association of Granite Manufacturers.
- National Association of Plumbers.
- National Association of Cleaners and Dyers.
- National Metal Trades Association.
- National Founders' Association.
- American Hotel Association.
- National Personnel Association, continuing and combining the activities of the National Society for Corporation Training and the National Industrial Relations Association.

A striking illustration of the progress which has been made in this direction is given by Doctor Myers, who reports that in 1915-16 an investigation of every industrial establishment in greater New York City, which employed 20 or more children under 16 years of age, showed that not one employer was willing to cooperate with the board of education in a part-time school arrangement, and that "the general attitude was that a company could not afford to release young workers from employment four hours per week for educational purposes even though the cost of instruction was borne by the city."¹⁶ By contrast was cited the completion in Akron, Ohio, in 1920 of an educational and recreational building costing \$3,000,000, paid for entirely by the Goodyear Tire & Rubber Co., and housing among other features an Industrial University, enrolling upward of 5,000 employees as students, many of whom attend classes on full pay on company time.

¹⁵ Editorial, *Voca. Educ. Mag.*, I, 1, p. 4, Sept., 1922.

¹⁶ Myers, George E. How industry is meeting the problem of industrial education. *Proc. Western Arts Assoc.*, Detroit convention, May, 1920.

Leaders in vocational education should assume responsibility for promoting a better understanding of their work. Doctor Prosser has emphasized the need for waging a continuous campaign to educate the general public concerning the objectives of vocational education, and the means deemed essential for the securing of these ends, and has expressed the opinion that "the greatest weakness of the work in some localities is the failure of the vocational educator to recognize that his program needs this leadership more than it does the meticulous administration of details."¹⁷

INDUSTRIAL TEACHERS' SCHOLARSHIPS.

To aid in assuring a supply of qualified teachers for vocational schools, two States have established systems of scholarships for prospective teachers in training. The following paragraphs are prepared from reports submitted by State officials:

In Wisconsin subsection 3 of section 2033 of the statutes provides for an annual appropriation of \$20,000 for scholarships to be awarded by the State board of vocational education. With a part of this fund the board each year grants 10 Grade A scholarships of \$50 per month each, for a period of nine months. Students who receive these scholarships are required to attend Stout Institute, and since the courses prescribed are two-year courses it is the practice of the board to renew the scholarships for a second year. The scholarships are granted only to men who have had at least three years of successful trade experience, and who have expressed a willingness to become teachers in the vocational schools of Wisconsin if granted the scholarship.

The New York Legislature in 1920 passed the industrial teachers' scholarship act providing \$50,000 annually for the training of industrial, trade, and technical teachers. In 1920 this sum was reduced to \$25,000 annually. This is not a measure for the improvement of teachers in service, but aims to improve the teaching personnel in day and evening vocational schools and part-time schools by drawing into the service a new group of specially qualified persons. Twenty-five scholarships of \$1,000 each are awarded annually to applicants who are required to pursue special courses at the State Normal School at Buffalo. The satisfactory completion of a course secures for the individual a life license to teach his trade in the vocational schools of the State.

The act is administered by the division of vocational and extension education of the State Department of Education, which deter-

¹⁷ Prosser, C. A. The outlook for industrial education. *Voca. Educ. Mag.*, 1, 1, pp. 3-5, Sept., 1922.

mines each year, on the basis of the needs in the field, the kinds of occupations from which men shall be selected for the scholarships, establishes the qualifications, rates the applicants, and outlines the training courses to be pursued. In the examination and rating of applicants the division is assisted by a special committee consisting of three representatives each of the State Federation of Labor, associated industries, and the State Department of Education.

THE LITERATURE OF VOCATIONAL EDUCATION.

In no way, perhaps, is recent progress in vocational education more strikingly apparent than in the development of the literature of the subject. In addition to a truly remarkable output of treatises, manuals, and textbooks from the usual publishing concerns, the following special sources are noted:

Agencies of the Federal Government, including especially the Federal Board for Vocational Education, and to a lesser extent the Departments of Commerce, Agriculture, Labor, and Interior, have published a large number of bulletins and reports on various phases of vocational education.

In addition to the foregoing, the War Department prepared and issued shortly after the close of the war a unique series of handbooks relating to training for occupations in the Army.

State boards for vocational education in most of the 48 States have had occasion to begin the publication of series of bulletins relating to the new types of activities under their supervision.

Numerous educational institutions, particularly those engaged in the preparation of administrators and teachers of vocational education, and including universities, normal schools, and other institutions, have published reports of studies, investigations, and proposals in great number and variety.

The more important correspondence schools have contributed extensively to the literature of vocational education, and at least one of the largest of these institutions is now making its text material available to the public.

PERIODICALS.

In addition to an increasing number of special articles in most of the educational journals of general circulation, the vocational education interests are now served by the following:

Vocational Education Magazine, established in September, 1922, by the National Society for Vocational Education as the official organ of that society, in response to what was held to be "an urgent need for a journal devoted exclusively to the interests of special education for vocations other than the professions." This is a

monthly magazine (10 numbers annually) maintaining the following special departments each with its staff of editors: Agricultural education, commercial education, home-making education, industrial education, part-time and continuation education, training in industry, editorial, book reviews, and news notes.

Industrial Education Magazine, established in September, 1921, to succeed and continue the *Manual Training Magazine*. This is a monthly magazine, maintaining a number of special departments, including plans and equipments, mechanical drawing, electrical work, auto mechanics, printing and bookbinding, farm mechanics, metal working, art crafts, woodworking, editorial, special articles.

Industrial Arts Magazine, established in January, 1912. This is a monthly magazine devoted to industrial arts education, manual training, art instruction, domestic science, and related subjects, and special articles on various phases of vocational education.

Mention should also be made of the *Vocational Summary*, published monthly for a time by the Federal Board for Vocational Education, Washington, D. C., as a medium of communication between the board and its agents in the field, State educational authorities, and the public generally. The first number appeared in May, 1918, and publication was discontinued in July, 1921, for lack of funds.

Personnel Administration, published monthly as the official organ of the National Personnel Association, succeeding *Corporation Training and Personnel*. The association has recently changed its name to American Management Association, and this will in turn lead to a change in the name of the journal.

National Vocational Guidance Association Bulletin, published monthly as the official organ of the National Vocational Guidance Association, to provide "a means for the interchange of ideas and news, an opportunity for presenting the activities of the national and local associations, and to place before all workers formal statements upon theory and practice" of vocational guidance.

One notable aspect of recent progress is to be found in the adjustments that are being made in the work of the regular public day school as a result of the influence of the vocational movement, and, conversely, the gradual broadening of the outlook of the vocational education program to include much more than simply "specific preparation" for the technical processes of a skilled trade.

It is perfectly clear that the movement has gone far enough to constitute a vital reform in the schools. * * * If anyone is in doubt * * * let him consider how far the commercial school has gone in recent years in remodelling its geography, in introducing mechanical science in its elemental stages, in applying arithmetic to industrial problems, and in substituting

informing industrial reading for the stories which used to constitute the reading material of the schools of 20 years ago. There is a new spirit in elementary education; it is the spirit of attention to practical needs.¹⁸

PREVOCATIONAL EDUCATION.

The term "prevocational education" continues to be a stumbling block to some educators, although the service which it represents is becoming available to a constantly increasing number of children. Two practically synonymous terms are also attaining a certain vogue: "Vocational finding courses" and "vocational try-out courses."

In a number of cities the work has developed to considerable proportions as a part of or closely associated with a general plan of vocational and educational guidance. Professor Brewer lists 17 occupations for men and 11 for women, "all of which are within the range of the try-out plan" in the junior high school, and points out that "recent experience in a number of junior high schools has shown that in the seventh and eighth grades six weeks' courses in each of several practical arts can be given with satisfaction to the instructor and the children."¹⁹

VOCATIONAL GUIDANCE.

In a summary of recent progress in vocational guidance Professor Kitson calls attention to the "astonishing ramifications" of the movement:²⁰

Public schools are adopting it as a part of their regular program. Colleges, universities, and technical schools are installing departments of vocational guidance or personnel. Particular attention is being paid to the vocational guidance of college women. * * * Business is expressing an interest in vocational guidance through its national organizations. * * * There is also a large group of miscellaneous organizations. * * * An increasing number of governmental agencies are adopting the methods of vocational guidance. * * * Psychologists and physiologists are doing research work in fields related to vocational guidance. Finally, labor organizations * * * recognize many points of interest and importance in vocational guidance.

The annual convention of the National Vocational Guidance Association, Detroit, Mich., December 1 and 2, 1922, afforded evidence of notable progress, according to the secretary of the association, who states: "Never has a series of papers presented more definite evidence of a real grappling with the problems * * *. Apparently we have entered upon the task of definite accomplish-

¹⁸ Judd, C. H. Fundamental educational reforms. *El. Sch. Teacher*, Jan., 1923.

¹⁹ Brewer, J. M. The need for try-out courses in the junior high school. *Indus. Arts Mag.*, XI, 4, pp. 85-88, Mar., 1922.

²⁰ Kitson, H. D. Progress and coordination in vocational guidance. *Nat. Voca. Guidance Assoc. Bull.*, I, 8, pp. 123-124, Mar., 1923.

ment and careful analysis."²¹ According to the same authority, all the papers of the convention could be grouped under four heads: (1) Analysis of some problem or phase of vocational guidance work; (2) definite proposals of workable plans for new steps; (3) reports of research; (4) reports of actual accomplishments.

The United States Bureau of Education conducted two conferences dealing with important phases of vocational guidance, with the following subjects of discussion: "Public school supervision of employed boys and girls," Milwaukee, Wis., January 11, 1922; "Studies about occupations in the public schools," Detroit, Mich., November 29, 1922.

Significant details concerning progress in vocational guidance may be noted in a recent summary of reports from 130 high schools, in 32 States.²² The average enrollment in these schools was 1,002. Of the 130 schools, 97 offer some special vocational courses; 54 schools have available reports of surveys of local occupational opportunities; 46 report prevocational courses or vocational guidance in grades 7 and 8; 81 schools make an organized effort to discover vocational aptitudes through work in English; 54 schools require or urge teachers to act in the capacity of vocational counsellors; 34 schools offer courses in vocational civics or "occupations"; 31 schools use a text in the study of occupations; 68 schools require written reports on local industries or other assigned vocational topics; 75 organize class excursions to local industries and commercial establishments; 51 schools employ a director or special teacher responsible for vocational guidance; in 62 schools this work is handled by the principal, and in 26 schools by the deans of boys and girls; 86 schools have employment or placement bureaus, and 43 function through central bureaus, usually under the direction of the board of education; 43 schools report employment supervision and follow-up work; 36 schools make some use of mental tests as an aid in determining vocational aptitudes. "The ideal is every teacher a vocational counsellor."

Vocational guidance of the greatest benefit to the individual is that guidance given through a series of controlled practical experiences, on selected jobs, drawn from a wide range of occupational activities.²³

VALIDITY OF FEDERAL AID LEGISLATION ASSAILED.

An event of great potential significance to the vocational educational movement occurred in the filing of a suit in the October, 1922,

²¹ Brewer, J. M. Impressions of the convention. Nat. Voca. Guidance Bull., I, 7, p. 103, Feb., 1923.

²² McDougall, H. R. Vocational guidance in high school. Indus. Arts Mag., XI, 4, pp. 133-135, Apr., 1922.

²³ Rodgers, R. H. Organization and teaching of industrial subjects in part time or continuation schools. Indus. Arts Mag., XI, 4, pp. 135-137, Apr., 1922.

term of the Supreme Court of the United States, by the attorney general of the State of Massachusetts, to test the constitutionality of the Sheppard-Towner Act, approved November 23, 1921, entitled "An act for the promotion of the welfare and hygiene of maternity and infancy." The principles of Federal aid embodied in this act are similar to those of the Smith-Hughes Vocational Education Act, so that the decision in this case will have a direct bearing on operations carried on under the latter.

The basis of the complaint is that the burden of paying for the expenditures incurred under legislation of this character "falls very unequally upon the several States," that the act is "a usurpation of a power not granted to Congress by the Constitution, and an attempted exercise of the power of local self-government reserved to the States by the tenth amendment," and that the proposed cooperation in effect sets up an agency that is neither the Federal Government nor the State government but "an alien form of government not provided for nor recognized by the Constitution, but inconsistent with and contrary to its provisions."

VOCATIONAL EDUCATION IN THE ARMY.

No account of recent progress in vocational education could be complete without some reference to the educational progress established in the War Department and the Navy Department. One of the striking developments of the war period was the utilization by the Army and the Navy of the lessons learned in civilian vocational education experience, and the selection and adaptation of various phases of educational service to the emergency requirements of national defense. The rapid readjustments and retrenchments following the close of the war necessarily brought many of these activities to a close, but much that is of significance to students of the subject remains on a permanent basis.

The first important step in the Army was the formulation of a system of personnel specifications which defined the personal characteristics, skill, and knowledge required in each type of service. From the educational point of view, these specifications served the purpose of defining the objectives of training and determining the courses of instruction needed.

Later, a beginning was made in the development of a series of objective tests, consisting of (1) aptitude tests designed to indicate whether the individual possesses a specific kind of ability, and (2) tests of proficiency, intended to reveal relative degrees of proficiency in specific abilities. This is one of the important tasks interrupted by withdrawal of funds, but it had proceeded far enough to be suggestive of great possibilities.

The educational advantages offered by enlistment, and particularly the opportunities for vocational training, have been recognized by many young men and have served to bring about substantial increases in enlistment and in raising the standards of personnel. The extent of the influence exerted by the Army is reflected in the following figures: Summer camps in 1922 accommodated 22,119 men for 30 days of specialized instruction, including physical, military, and vocational training; the Reserve Officers' Training Corps enrolled 104,000 students in 341 units, in 227 colleges, universities, and other institutions; each year there are discharged about 40,000 young men who have had three years of training, including some form of special vocational instruction.

The most significant contribution, however, is the development by the Army of technique and methods which are regarded by those competent to judge as "a contribution of the highest order to the pedagogy and administration of trade teaching." The essential features of the plan have been summarized as follows:²⁴

- (1) It gives an analysis of the trade on the basis of what a man must be able to do.
- (2) It lists the essential topics of information in the trade.
- (3) It requires the student to analyze his job in the terms of the operations of the trade.
- (4) It requires the student to make a definite plan of the order of procedure.
- (5) It enables the class, or individuals of the class, to handle any kind of practical job within the range of their ability and at the same time to get the utmost of the educational elements out of it.
- (6) It eliminates the time element. When a man becomes proficient in an operation he is given a proficiency mark. When he is proficient in all of them his training is completed without respect to time.
- (7) A statement can be given of exactly what a man is able to do.
- (8) The topics of information and the vocational problems are taught by the shop teacher in the shop.
- (9) The analysis of a trade shows that a very large number of the operations of the trade are only semiskilled in character. We are, therefore, able to direct the training to the highly skilled operations rather than to the semiskilled operations which require little time to master.

Education in the Army has been placed in the War Plans Division, under the General Staff, and has had the services of an advisory board of civilian educational experts. From the beginning a broad general policy has prevailed of offering throughout the service "adequate and immediate opportunity for the educational and vocational training of such men as desire it" which will "fit men for effective military service and for success in civil life."

²⁴ Selvidge, R. W. Teaching a trade in the Army. *Man. Tr. Mag.*, XXII, 7, pp. 246-259, Jan., 1921.

VOCATIONAL EDUCATION IN THE NAVY.

On June 1, 1920, a new educational plan was put into operation by the United States Navy, which includes opportunities for vocational training on a comprehensive basis. In its recruiting literature the Navy has consistently emphasized the advantages of travel and study afforded by enlistment; and since the equipment of a modern fighting ship includes a wide range of machinery and mechanical and electrical appliances, as well as a complement of officers trained in many technical and scientific lines, unusual facilities are available for practical education.

After nearly a year of preliminary study and preparation the plan of education on shipboard was given a trial on the *Rochester*. The plan commended itself from the start and rapidly spread until within a few months it was in operation in all the fleets. The essential features of the plan are:

- (1) The school work is optional.
- (2) An education officer is detailed to the ship to encourage and aid the men in their school work.
- (3) The commanding officer sets aside specific time for study.
- (4) The chief methods of instruction include the use of study outlines, based on the best experience of correspondence schools; the use of motion pictures, lantern slides, charts, etc., and the counsel of an education officer.
- (5) The education officer observes a definite schedule of office hours in order to be accessible to the men for individual interviews.

The plan utilizes the advantages of the better type of correspondence instruction, with its emphasis on individual effort and its provision for individual advancement, and adds the personal attention and guidance of experts in various lines. "The education system is teaching the young man of the Navy to succeed in his job, with the incentive of a better job and a greater success ahead."²⁵

The plan includes 81 courses of instruction available or in preparation, classified into 12 groups, as follows: Navigation, seamanship, ordnance and gunnery, deck artificer, communications, steam engineering, electrical engineering, gas engineering, yeomanry, commissary, pharmacy, general subjects. In March, 1922, the total enrollment in education courses was 6,228 men, representing 241 ships and 6 shore stations. To illustrate the scope of the work it may be stated that from November 1 to December 15, 1922, the central education office sent out to the ships 58,429 lesson assignments, 1,444 textbooks, and 547 keys.

In March, 1923, the work was reorganized as the Training Division of the Bureau of Navigation, and the division is now in charge of all educational activities under the Navy Department except the Naval Academy and certain stations. The division consists of three

²⁵ Oregon Journal, Portland, Oreg., Apr., 1923.

sections: Training and education of officers, training and education of enlisted men, morale and recreation.

Lack of space prevents more than a passing reference to the special adaptations of vocational courses which have been worked out in the United States Marine Corps. Opportunities for instruction in a wide range of subjects, under skilled and sympathetic direction, are open to all members of the service.

CORRESPONDENCE SCHOOLS.

Recent interesting developments in two of the larger correspondence schools may be cited as evidence of a growing appreciation of the broad significance of vocational education and as examples of the stimulus to public education afforded by private agencies which are more free to note and respond to new demands. Since a large proportion of the service rendered by the correspondence schools is in the field of vocational education, their experience should be suggestive to public schools working on similar problems.

In many cases students have enrolled in correspondence courses leading to occupations or positions for which they do not have the necessary qualifications, as, for example, the student who aspires to be an electrical engineer but who is lacking in the taste for and ability in higher mathematics. To deal with the special problems of students who become discouraged because of unsatisfactory progress, the American School, Chicago, Ill., established early in 1921 a "vocational guidance service," and adopted a definite policy of endeavoring to "graduate a larger proportion of the students enrolled and thereby increase the effectiveness of our service."

After much careful study a questionnaire consisting of 112 questions and mental tests was evolved for the purpose of securing from the student the information deemed essential as a basis for helpful advice. This is accompanied by a 270-page book setting forth a general discussion of the questions. After the plan has been fully worked out it is expected that the use of this vocational guidance service will be made compulsory on the part of every prospective student and that it will function "as an entrance examination to the various courses and as a means of preventing misfits as far as it is humanly possible." Later it is proposed to offer this vocational guidance service to the general public.

In order to render an enlarged service to education and industry, the International Correspondence Schools in 1920 launched a program of interest to the public at large. It was recognized first that the movement must be characterized by an unselfish service to the public, having no thought of immediate return. Secondly, it was apparent that an increasing demand for education would benefit all

kinds of schools, public and private, the International Correspondence Schools included. That the facts bear out this premise is now seen.

To accomplish these ends the schools established the industrial service division, "Trained Men," a monthly magazine, and the lecture bureau. The industrial service division has for its primary object the developing of cooperative business relations with organized education and industry. Prejudice against instruction by the correspondence method has given way to confidence in the application of this method to the solution of many vocational educational problems. Already more than 1300 manufacturers have utilized the educational facilities of this institution in the promotion of their own training programs. These establishments vary in size from 100 to 100,000 employees. The application of this cooperative arrangement varies according to the conditions from weekly interviews by International Correspondence Schools field men with students and prospective students to the entire training program of apprentices and others. Monthly reports to employers showing the progress of every student-employee have brought about a 37 per cent increase in the studying done.

The industrial service division is called upon to make special investigations and reports relative to the educational problems confronting business and educational leaders.

"Trained Men," a monthly magazine for executives, is one of the agencies built to serve industry and education as a clearing house of information pointing out the part that education plays in the solution of organization problems. It contains messages from outstanding political, professional, and business leaders.

The lecture bureau was organized in December, 1920, as a contribution of the International Correspondence Schools to a thinking public interested in building citizenship of the highest type. During 1921 and 1922 the manager of the bureau delivered 720 addresses in 730 days before every type of organization. The International Correspondence Schools considered that what has been accomplished in setting up friendly relations with industrial concerns, educational institutions, public-service corporations, labor organizations, chambers of commerce, manufacturers' associations, etc., is only an index to what may be expected through future developments.

Arrangements have been made with 38 State divisions of vocational rehabilitation for the retraining of persons who are eligible to receive the benefits of the rehabilitation act. Several hundred disabled persons, most of them in placement training, are studying International Correspondence Schools courses.

MANUAL ARTS INSTRUCTION.

As suggested in a previous paragraph, no account of recent developments in vocational education would be complete without noting the extent to which the movement is being influenced by the general educational point of view, and to which it, in turn, is profoundly affecting other phases of the work of the public schools. The effects may be discerned most clearly perhaps in the modifications which are taking place in the manual arts instruction offered in elementary and secondary schools, particularly in the seventh, eighth, and ninth years, although significant readjustments are apparent elsewhere.

Of chief importance is a growing emphasis upon the necessity for maintaining proper standards of technic in all lines of school shop drafting and laboratory work. Leaders in the manual arts field have contended for this for years, but it is now receiving more general recognition. The ultimate bases for standards of technic are to be sought in the requirements of practical life. According to this view, for example, the acceptability of the weld in a link of chain is not determined by comparison with the best average performance of ninth-grade boys, but by comparison with an accepted commercial product.

A necessary corollary demands the exercise of judgment in selecting projects for the school shop the accomplishment of which, on the basis of commercial standards, lies within the capacities of the students and other practical limitations.

The application of commercial and industrial standards to school shopwork has raised a number of vital questions relating to equipment, qualifications of teachers, the time element, and the like, the solutions of which have not all been fully worked out. The delay has been due in part to inertia and to the usual difficulties involved in following a line of logical reasoning to new conclusions. Much progress has been made, however, in the attempt to use tools, processes, and materials in the school shop in accordance with what is regarded as the best commercial practice.

As an illustration of the direction in which this point of view leads, a city superintendent of schools may be quoted who calls attention to the fact that undoubtedly some school shop projects "Are so valuable educationally that commercial efficiency may be forgotten," and adds:

No high-school commercial department would succeed if it approved graduates unable to take dictation at a reasonable degree of speed or write accurate letters on the machine. Here the school standard and the commercial standard are approximately equivalent. To be satisfied with less than this in the industrial department is to lose sight of time values. * * *

The manual training department of the schools of Montclair, N. J., has sought consistently to develop projects presenting a strong appeal to the pupils' interests which would, at the same time, show a product possessing a commercial valuation in excess of the actual cost when labor, supervision, and material were all included. * * *

Necessarily many projects are undertaken in the manual training course that do not show a commercial profit. * * * When a job is undertaken on a commercial basis, money and time values are reckoned closely, but educational jobs can not be put on the same basis.²⁶

In urging better organization of manual work in the elementary schools, the California State commissioner of industrial and vocational education calls attention to the difficulties involved in the attempt to realize at the same time the general development values of the educational philosophers and the training values desired by the industrial world. He suggests, as the dominant purposes of manual training instruction in the seventh and eighth grades—

to develop a larger mental grasp of the industrial occupations of the community, to provide opportunity for the pupil to try his hand at some of the simpler operations of the various crafts, and to develop such hand control and skill as may naturally grow out of such operations.²⁷

To accomplish these aims, Commissioner Snyder proposes that the instruction include: (1) Home occupations of an industrial character—repair of furniture; screen making, fitting, hanging; window repairing, door repairing; study of adjustments, and minor repairs of plumbing fixtures, heating and lighting systems, and electrical apparatus; sewing machines, and other household equipment; (2) study of machines that produce and develop power, light, and heat—disassembling, assembling, and operating of as great variety as may be practicable of machines and appliances found in the vicinity.

For the carrying out of such a program, many school laboratories of the traditional type would need to be transformed gradually, by adding items of equipment from time to time, and shop teachers in many cases would need to supplement their training and experience by evening school or summer work along new lines. The development in these directions which has already taken place in the public schools of many progressive cities is fully as striking and as significant as any other phase of the vocational education movement.

²⁶ Bliss, D. C. Commercial efficiency in manual training. *Indus. Arts Mag.*, IX, 4, pp. 151-153, Apr., 1920.

²⁷ Snyder, E. R. Manual training in elementary schools of California. *Indus. Arts Mag.*, IX, 1, pp. 30-31, Jan., 1920.

CHAPTER XIV.

HOME ECONOMICS EDUCATION.

By HENRIETTA W. CALVIN.

***CONTENTS.**—Introduction—Reaction in favor of home economics—Home economics and social service—Home economics in high schools—Elective semester courses in home economics—Food courses—Clothing courses—School health work—Home economics rooms—Unit kitchens—Increase in extent of teachers—Home economics in higher educational institutions—Child care in home economics courses—Research in home economics department—Home economics graduates in research positions—Hospital dietitians—Home economics women in commercial positions—Home economics in banks—Home economics and State institutions—Land-grant College Association—The Merrill-Palmer School—Professional courses for teachers at Johns Hopkins University—Home economics in the Department of Agriculture—Federal Board for Vocational Education—Bureau of Education activities—Home economics in foreign countries—Home economics associations.

INTRODUCTION.

Home economics education includes not only that instruction in household arts and sciences which is given in elementary and secondary schools and universities, colleges, and normal schools, but it also includes that which is taught through correspondence and extension courses.

HOME ECONOMICS IN ELEMENTARY SCHOOLS.

In elementary schools home economics departments have been affected by the general demand for school-expense retrenchment.

In the Pacific Northwest and in a few places in New-England the very existence of the departments has been imperiled. In California, and in the South, Southwest, and Central States, these conditions did not arise, but need for retrenchment in home-economics expenses was evidenced.

Strict economy has required the sale of foods-laboratory products, thus necessitating the preparation of foods in salable quantities and of standard qualities; and this, in turn, has made possible the use of large quantities of material, so that cooking minute quantities heretofore dictated by economy has given way to the use of quantities comparable to the amounts used in an average family. The fact that the prepared materials had to conform to the market demand resulted in the use of simpler and less expensive modes of preparation and extreme care in the quality of the resulting products.

In Seattle, Wash., the home economics department, with the exception of teachers' salaries, has been made self-supporting by the sale of cooked products in teachers' and pupils' lunch rooms and to school patrons.

Los Angeles, Calif., reports as follows:

By running our higher grade work on this basis (i. e., selling the products in the lunch room), we have been able during this last year to cut our running expenses in half and, in many cases, to pay for the entire cost of the supplies used in the cooking classes.

Everett, Wash., reports:

The foods classes work on the "quantity basis plan" or "family size" recipes. There are enough members on the faculty alone who would be delighted to purchase any preparations which under a ruling of the board must be sold for cost, but we find the girls themselves eager to buy (at cost) and this is the best connecting link you can find between the school and the home. You might say it is a fine way to advertise in the home. However, we do not aim to commercialize education, but we do aim to correlate the two in such a way that the girl is taught the practical along with the theoretical.

This year four crates of peaches were put up for one home, giving each girl an opportunity to can 1 quart. Besides this, each girl brought from home a quart jar, her sugar, and enough fruit to fill it. The classes have had splendid experience in canning, along with making conserves, jellies, jams, etc.

When it comes corn-bread time, or scalloped food lessons or pie days, there are enough families living within a few blocks of the school who plan on the hot dish arriving just in time for lunch. Cakes are baked full size, cookies by the dozen, etc., but always before planning above lessons customers are secured. The course is never disarranged to cook for individuals, but the regular outline is followed and the food disposed of wherever possible.

The money which is received of course is not great, because the food is sold at actual cost, but is turned in to the school clerk, providing bills run over those of previous years when we cooked under the small-size recipe. If our bills do not exceed that amount, the money is then being used to furnish or rather complete furnishing the school department.

Though it has not been difficult to solve the problem of marketing class products in the smaller places because of the close acquaintanceship of teacher and school patrons, it remained for New York City to show that it is possible in certain communities within a great city to sell foods cooked in home-economic classes.

Wherever the school patrons are accustomed to buy from delicatessen stores, they can easily be led to purchase the products of the cooking classes.

REACTION IN FAVOR OF HOME ECONOMICS.

Proposals to eliminate home economics, music, art, industrial arts, and agriculture, and to return to purely academic instruction, ostensibly because cheaper, has led to a reaction and a marked stimula-

tion of local interest in home economics and an increased favor among school patrons. This was particularly true in Washington. The higher values of elementary education in home economics are not more tangible than are those in English, geography, or mathematics.

It is regrettable, though true, that home economics education is often judged by material and tangible results only. Numbers of garments made and quantities of foods served are but indicators of the progress made. As indicators, they are of value since it may be assumed that parallel with the making of garments and cooking of foods instruction has been given in the artistic, economic, hygienic, and sociological aspects of the topics considered. As indicators such statistics as follow are of interest.

There is a secondary value not to be overlooked—the labor of the children has enhanced the values of the materials used, and, in the aggregate, this increased wealth is of no inconsiderable amount.

The following records some of the activities of the Cleveland, Ohio, home-economics pupils in the fall of 1921:

Fruits canned	quarts	2,528½
Vegetables canned	do	3,474½
Total		6,003
Jellies and conserves made	glasses	3,761

Disposition: Lunch room—Fruits and vegetables, 984½ quarts; jellies, etc., 244 glasses. Sold to teachers—Fruits and vegetables, 308½ quarts; jellies, etc., 407 glasses. Home—Fruits and vegetables, 2,310 quarts; jellies, etc., 656 glasses. Used in school—Fruits and vegetables, 262½ quarts; jellies, etc., 101 glasses.

SEATTLE PUBLIC SCHOOLS.

HOME ECONOMICS DEPARTMENT.

(Items from report of 1920-21.)

1. Elementary sewing, sixth and seventh grades (1 lesson per week): Holders, 961; towels, 1,133; bags, 2,277; aprons, 1,300; patches, 3,863; darning, 1,447; needlecases, 1,352; wash cloths, 1,378; miscellaneous, 938.

2. High school and industrial: Aprons, 1,625; underwear, 4,704; dresses, 4,070; blouses, smocks, and middies, 1,174; suits (skirts and jacket), 110; coats, 182; hats, 1,146; miscellaneous articles, 2,503.

3. Canning and preserving: Number of quarts done at school, 7,992; number of quarts done at home, 27,727.

4. Community projects: Stage curtains for schools, 4; costumes and properties for school plays, 701; number of school functions, banquets, etc., for which food was prepared and served, 125; number of schools in which foods classes cooperate with school lunch, 16; number of schools in which foods classes have entire charge of lunch, 2; infant layette sets (34 articles each), 3; garments for charity, 276; towels for gymnasium and lunch rooms, 362; athletic blankets and letters, 260; miscellaneous articles for school, 385; children's garments, 266; gifts, 153; articles for sale, 157.

Home work stimulated: Number who repeat cooking lessons at home, 2,726; number who assist regularly in preparing meals, 2,747; number who assist daily with other house work, 2,776.

A number are earning money by means of ability gained in sewing and cookery work.

A large number make all their own clothing and assist with family sewing.

Canning report (number of quarts), 1921-22.

Fruits, etc.	At school.	At home.		Total quarts.
		Assisted.	Independent.	
Fruit.....	4,265.0	24,511.5	5,352.5	34,129.0
Vegetables.....	1,484.5	5,743.5	1,198.5	8,376.5
Pickles.....	546.0	3,706.0	557.5	4,809.5
Jelly.....	2,399.0	11,344.0	3,772.0	17,425.0
Marmalade.....	4,101.0	9,526.0	4,218.0	17,845.0
Grand total.....				82,585.0

In Chicago the number of completed dresses reported to the central office from all the schools this year was 27,475; pieces of underwear, 29,723; all other articles, 54,433; making a total of 111,631 garments.

These are but typical examples of actual material accomplishments in home economics and could be multiplied by thousands. It may be again emphasized that these figures merely indicate tangible results—the intangible are of far greater importance.

HOME ECONOMICS AND SOCIAL SERVICE.

In Cleveland, much extra time was given to relief work. In one school, where it was much needed, garments were solicited, cleaned, mended, and in some cases remodeled; shoes blacked, new laces put in; and the clothes given out through the principal's office.

The 654 garments made for school plays and pageants include stage curtains and drops, costumes, and paper flowers.

Under miscellaneous sewing are listed all kinds of projects: Articles for bazaars; furnishings and curtains for rest and teachers' lunch rooms; shop aprons for boys; machine and chair covers; pennants; arm bands; bean bags; monograms on sweaters; rehemming of window shades; charts for the office; and some very successful "gym" shoes in some of the poorer districts.

During the fall term of 1921, at the request of the Berkeley (Calif.) municipal Christmas-tree committee, material was purchased for the making of garments, to be distributed at Christmas. The tabulations that follow show the number and kind of garments that were made by the sewing classes for the 1921 Christmas distributions. Garments are also being made again this year for the 1922 Christmas tree, the sum of \$200 being allowed for the purchase of materials for the garments this year. The tabulation shows the num-

ber of garments completed last spring, and in addition 300 yards of material will be made into garments during the following term.

Garments for municipal Christmas-tree committee, 1921.

Dresses	99	Rompers	9
Smocks	33	Dolls	33
Petticoats	1	Dresses and bloomers	14
Gowns (outing)	69	Bloomers	18
Blouses	47	Bead chains	25
Shirts	7		
Boys' suits	2	Total	249

Garments completed for municipal Christmas-tree committee, spring term, 1922.

Nightshirts (boys)	5	Shirts	6
Nightgowns (girls)	6	Dresses and bloomers	2
Smocks	24	Blouses	31
Dresses	76		
Skirts	9	Total	159

During the past year girls in the Washington Irving, Julia Richman, and Wadleigh High Schools, New York City, made 2,600 articles of clothing for the children of unemployed ex-service men. The work was done under the direction of the New York County chapter of the Red Cross.

In Chicago an assistant to the director decides upon all equipment for lunch rooms in the schools and home-economics women direct school feeding.

In Washington, D. C., active cooperation existed between the Red Cross Association and the home-economics department, so that the home-economics supervisor not only administered the preparation and service of foods to tubercular children but also had prepared jellies, fruit juices, etc., for use in hospitals.

HOME ECONOMICS IN HIGH SCHOOLS.

Home economics in the senior high school and upper three grades of the 4-year high school is, very generally, an elective subject.

About 1 girl out of each 12 girls in these upper high-school years will be found in home-economics classes in the schools of eastern cities. This relatively small per cent of girls carrying home economics is due to several factors affecting the choice of high-school electives.

First, more than half of all girls in these high schools enroll in commercial courses, which courses usually offer but few opportunities for election of work outside of that line. Second, girls not choosing the commercial curriculum are usually anticipating advanced education in higher educational institutions.

Many of the larger eastern colleges and universities still retain the old and conservative standards of entrance requirements which necessitate the selection of such high-school courses as will fulfill these requirements. Third, the home economics instruction offered in high schools is too often in the nature of a complete curriculum which must be elected in toto or omitted altogether.

A notable illustration of what can be accomplished where the first of these conditions dominates, but where home-economics courses have been arranged with especial reference to the needs of commercial students, have been sympathetically taught, and have been heartily commended by the high-school principal, is that of home economics in the girls' commercial high school of a city in Massachusetts where more than 60 per cent of the 1,200 commercial students are enrolled in home-economics classes.

The conditions in the Pacific Northwest are somewhat different from those existing in eastern schools. A greater proportion of the girls in high schools select one or more lines of work in home economics. In this section the demand for office clerks is relatively less with a consequent smaller per cent of girls enrolling in commercial courses; the universities and colleges are more liberal as to entrance requirements; and the inclination among high-school girls to marry young and take up actual housekeeping duties is more marked.

ELECTIVE SEMESTER COURSES IN HOME ECONOMICS.

The tendency to offer high-school elective courses in home economics in place of a prescribed curriculum and to so organize these courses that a full curriculum may be secured when all are taken in sequence is increasing. There is a further tendency to so administer each semester course as to make it independent of prerequisite courses.

Many of the high schools of Chicago have doubled the enrollment in the household arts department. The number of students specializing does not seem to increase, but the number taking the general courses has doubled or trebled. All of the high schools have not as yet made it possible for the students who wish to work to take it.

A careful study has been made of the homes of young married people for the purpose of seeing wherein the high schools fail to train the girls for their responsibility of running the home. The cause for the increase of divorces in the United States has been taken up by a committee of household arts teachers, with the same purpose in view to see wherein courses in the high schools could be strengthened so as to prepare the girls for the actual problems they have to meet in life.

As a result of the studies it has been recommended that courses in the management of the home, including the actual cost of maintaining the home and the responsibilities, together with definite training in the rearing of children, be emphasized in the high schools.

It has also been suggested that the students come directly in contact with small children. In Chicago the Winchell Continuation School has a course with a day nursery as its laboratory. From 6 to 12 children are taken care of, clothed, fed, and trained in good habits. Several hundred girls in the school are making a definite study of these children and the methods of handling them. At the same time they are taking class instruction in the problems that come before childbirth, in the care of the mother, and in the care of the infant. We find this a very popular course, and it is such a course as this that is being recommended for all high schools.

FOODS COURSES.

The type of high-school instruction in foods has been sharply modified. In all the more advanced systems cooking processes receive less stress than formerly and nutrition and dietetics are given greater emphasis. At the beginning of the food courses the high-school girl is weighed and measured, and thereafter she studies her own diet with the motive of securing and maintaining a high degree of physical health. Later in the course each pupil becomes responsible for the nutritional condition of some younger child.

An especially interesting piece of work was done during 1921-22 in the schools of Oakland, Calif. In these near-by day nurseries were adopted by the pupils of the school and certain responsibilities assumed. Foods classes became sponsors for the noon meals and in successive groups went to the day nursery and prepared and served the food. At regular intervals these same classes brought all the children to the school and there provided a lunch for them, thus making child feeding a practical problem.

CLOTHING COURSES.

Clothing courses have undergone similar modifications. Greater stress is being placed upon the economics of clothing and less upon the technique of garment making. Budgeting personal and household incomes is emphasized in all high-school courses.

In all types of home-economics instruction, there is evidenced a courageous abandonment of the older formal types of teaching and the adoption of socialized class instruction; an adjustment to actual economic and social conditions and the maintenance of standards of simplicity and economy.

SCHOOL HEALTH WORK.

Home-economics departments have been extremely active in assisting in school-health activities. Not infrequently the home-economics director is more adequately prepared to advise upon questions of nutrition than is any other member of the regular school staff. She is trained in chemistry, bacteriology, physiology, and hygiene,

with special training in nutrition and dietetics; hence, it is reasonable that she should administer all school-feeding projects and assist in nutrition clinics.

The following statement shows the relation of the home-economics department to the health program of the Berkeley schools:

The home-economics department is to be responsible for the following work:

- (1) Mid-morning milk.
 - (2) Hot noon lunches.
 - (3) Nutrition instruction (follow-up work): (a) Groups of mothers of undernourished children for conference and instruction in nutrition; (b) Groups of boys and girls selected from the principal's office reports from physical education and health-development departments.
 - (4) Home visiting for teaching mothers cooking and nutrition if necessary.
- Mid-morning milk is now served in 15 elementary buildings and 3 junior high schools to all pupils whose parents wish to pay 20 cents a week for the service. There are only 2 elementary buildings and 1 junior high school in Berkeley that are not serving mid-morning milk.

Hot noon lunches are served in 6 elementary buildings, 1 junior high school, and the high school. Women are employed in all lunch rooms for the heavy work but are under the direction of the home-economics teacher. The girls in the food classes do quantity cooking for the lunch rooms whenever it is possible to make the lessons of value to the pupils.

The outstanding accomplishments in Los Angeles have been as follows:

One strong development has been the increased ability of the teachers to approach the problems from the pupils' standpoint instead of their own.

Another development is in the deepened motivation given all of our work by the more extended and definite use of the home projects. Rightly used, there is nothing that vitalizes the work so much as the close contact thus established between the home and the school. Still another most worth while forward step has been the cooperative spirit established between the local business houses and the home-economics department. Stores, factories, laundries, bakeries, and dairies all are working with the department in every way they possibly can.

Yet another step has been the outlining of a new course of study for junior and senior high schools based upon the work given in the lower grades. This course is so planned that the pupil from the junior may enter the tenth grade senior high school with the same credit as the girl from the ninth year in the senior high school; yet the courses are adaptable and may be arranged to meet the needs of each particular school.

HOME-ECONOMICS ROOMS.

One indication of the present attitude toward home economics in the public elementary and secondary schools is the universal custom of assigning rooms to home economics in the plans for all new school buildings.

Since architects have so generally abandoned the advocacy of basements under the entire school building, new home-economics rooms are usually located either on the first or on the top floors.

Those who approve first-floor rooms for home economics base their arguments upon the ease of access of these rooms for the reception of supplies and disposal of refuse; and, if they also think it best to place the cafeteria on this floor, the ease of transference of cooked foods from the one to the other is also mentioned.

Since night classes are often conducted in home-economics rooms, the readiness with which these may be reached is another argument for first-floor location.

The top floor presents better conditions of sanitation; odors from cooking do not spread through the building; dust of street and yard does not so readily find entrance; air circulation is apt to be freer; and sometimes light conditions are better. Since often the home-economics periods are longer than the usual class periods, the location of home economics on the top floor somewhat lessens the total day's stair climbing. Either the first or the top floor will prove satisfactory if properly equipped.

The accepted plans for the arrangement of cooking equipment are undergoing marked modifications. The traditional hollow-square placement, the individual hot plate, and the one or two sinks for common use by all students have given way to arrangements which provide for group work.

The accepted plan provides for one cabinet gas stove (in regions where gas is used); and one small sink and table space, approximately 5 by 4 feet, for each group of four girls.

There is no unanimity of opinion concerning the so-called *unit kitchen* arrangement, which provides for partitioning the foods room into small divisions of about 90 square feet of floor space, together with such placement of equipment for four students as to resemble a family kitchen.

The new schools of Baltimore, Md., have group arrangements as above explained, but do not have unit kitchens.

The new schools in New York City allot two rooms for foods and housekeeping instruction. In one of these rooms there are three unit kitchens, affording practice space for 12 pupils, and a long cooking table with individual hot plates, accommodating 12 pupils. In the second room there are the conveniences of a small modern flat.

In Berkeley, Calif., most attractive unit kitchens have been arranged in all new elementary school buildings. The walls are light, the partitions about 6 feet high, the equipment relatively inexpensive, and both teachers and pupils find working in these rooms most agreeable.

In Chicago a number of different new arrangements of equipment are being tried out in the new schools.

The consensus of opinion seems to indicate that an apartment in a school building is with difficulty used effectively, and unless so used the present cost of buildings makes such space allotment unjustifiable.

A satisfactory solution of the problem of establishing home economics in an already overcrowded school has been by the use of a neighborhood dwelling or two portable buildings.

UNIT KITCHENS.

In Berkeley there are unit kitchens in five elementary buildings and one junior high school.

The kitchens are 8 feet wide and 10 feet long and the partitions 4 to 5 feet high. The sinks and ranges are placed back to back on the partitions, while the work table is placed at the front of the kitchen, so that the work is carried on under the supervision of the teacher almost as easily as under the old plan of parallel tables or the hollow square.

Teachers who instruct a part of each week in the buildings having the old type of kitchen and in buildings having the kitchenettes are enthusiastic in their preference for the unit kitchens. The students also respond better to the work under the more natural surroundings.

Eleven kitchens were newly equipped as centers in Baltimore, and 18 new centers for clothing classes were established.

Seven junior high schools were supplied with practice apartments.

INCREASE IN EXTENT OF TEACHING.

Baltimore night school enrollment developed as follows: In 1920, 134; in 1921, 488; in 1922, 1,984.

The increased size of the home economics staff in Baltimore was as follows: In 1919-20, 71; in 1920-21, 77; in 1921-22, 101; in 1922-23, 109.

During this period a full-time supervisor of home economics was appointed in Baltimore for the first time.

Baltimore's development was a result of the educational survey conducted under the direction of Doctor Strayer, of Columbia University.

Home economics has not been newly introduced in many new schools during this biennium. The reasons for this partial cessation of increased extension of home economics teaching have been various: In every section of the country rigid economy in school affairs has been necessary and no new lines have been introduced; there has been a shortage of home-economics teachers and only the better-paying positions have been filled; home economics is now existent in almost all schools having adequate financial resources.

HOME ECONOMICS IN HIGHER EDUCATIONAL INSTITUTIONS.

Home economics in universities and colleges has undergone changes as to types of work given rather than as to numbers of students served.

One regrettable condition has persisted; that is, the frequent changes of home-economics women in places of responsibility. No less than 26 changes have occurred in the past two years in the personnel of the heads of departments of home economics in the larger colleges and universities, and there has been a 50 per cent change of the entire staff of college home-economics teachers during the same period. The changes in State supervisory positions are quite as frequent as those in college.

These conditions can not fail to retard the advancement of home-economics education.

CHILD CARE IN HOME-ECONOMICS COURSES.

One of the most admirable modifications of home-economics courses is that of increased time and attention devoted to training young women in child care and welfare. One or two children are adopted into each of a number of practice houses maintained in connection with a home-economics department. The Colorado Agricultural College, North Dakota State University, Oregon Agricultural College, Oklahoma Agricultural College, and the University of Arizona have progressed so far in actual child care that this work is no longer in an experimental stage. In Oregon there have been more children where natural guardians wished to place them in the college-practice home than could be taken care of. The parents have always paid the expenses of the children.

In Colorado the orphan of a tubercular mother was adopted into the home and has afforded a most valuable illustration of the results that may be secured for a child in subnormal physical condition and with a poor inheritance when kindly and intelligent care is secured.

RESEARCH IN HOME-ECONOMICS DEPARTMENTS.

Research in home-economics departments has increased greatly. The following condensed summary of research work done in home-economics departments was contributed by Doctor Denton, assistant chief of the office of home economics of the Department of Agriculture:

The effect of cooking on vitamins has been studied in home-economics departments at Columbia, Chicago, Wisconsin, Minnesota, Missouri, and California Universities. The problems of bleached flour have received attention in Florida State College. Effect of altitude upon sugar cookery was studied at Wyoming Agricultural College. Other studies in fondant and candy making have been made at Columbia University and Penbody Normal College. The cooking qualities of Colorado potatoes have received attention at Fort Collins, Home-economics women in the universities of Chicago, Minnesota, Maine, California, Indiana, the Agricultural College of Utah, and the State College of Washington have cooperated in an effort to determine the effect of temperature,

kind of oil, kind of egg, proportion of oil to egg, and manner of beating on the quality of mayonnaise dressing. Studies in fuel economy with gas or electric stoves have been made in the University of Washington, Kansas Agricultural College, Ohio State University, and the office of home economics. Chemical changes in culinary fats after frying have been determined at Columbia.

Different uses of fireless, pressure, and other steam cookers have been studied at Purdue University and the office of home economics in Washington, D. C. A number of other problems in experimental cookery have been studied at the office of home economics, the universities of Columbia, Chicago, Missouri, and California.

The nutrition and metabolism of women and children have afforded research themes for home-economics departments at the Universities of Chicago, California, Washington, Illinois, and Kansas, Kansas Agricultural College, and the office of home economics. Textile research has been carried on at the Universities of Washington, Minnesota, Chicago, Missouri, and Columbia, and at Iowa State College. Studies in household management are being made at the Universities of Columbia, Minnesota, and Washington. Educational tests within the home-economics field are claiming some attention from home-economics women, especially at the University of Chicago and in the Detroit public schools; other studies of the order of educational research are made in the Bureau of Education and the Federal Vocational Board.

In the University of Washington the first part of a valuable study was conducted. This piece of research was to find out what home duties girls of the seventh and eighth grades actually discharge. When such knowledge is secured from some 1,000 girls and mothers, it will form a sound basis for the formulation of courses of study in home economics for these grades.

Questionnaires were prepared in the home-economics department, and the information required was secured through interviews with the mothers and the girls themselves. Only about 100 complete sets of data were secured during this first season of work; hence it is too early to predicate results.

Were universities in other sections of the country to undertake like investigations, a body of knowledge of actual existing home conditions that would prove invaluable would be secured. Thus far home-economics courses in public schools have been designed to function under assumed but not definitely known home conditions.

HOME-ECONOMICS GRADUATES IN RESEARCH POSITIONS.

Research positions held by graduates of land-grant colleges include public health, medical research, nutrition laboratory work, food research in the home-economics division of the United States Department of Agriculture, experiment-station work, and commercial research. The members are distributed among the colleges as follows: Cornell University, 5; Kansas State Agricultural College, 9; Missouri University, 1; Purdue University, 1; University of Wisconsin, 1. . . .

The survey makes it evident that research effort is increasing in home economics in land-grant colleges.¹

¹ Contributed by Dr. Helen Thompson, of the Kansas State Agricultural College.

HOSPITAL DIETITIANS.

Home-economics teaching has been officially recognized by the Public Health Service of the Treasury Department, and is one of the requirements made by those taking civil-service examinations for positions as dietitians in the hospitals under that department.

A two-year home-economics course, with six months' service as pupil dietitian, is considered the minimum training desirable for a dietitian and a four years' course in home economics is advised.

Only within recent years have home-economics trained women been recognized by physicians as persons having a contribution to make to medical education.

The College of Medicine of the University of Iowa is the first institution of its kind to appoint a woman to the chair of nutrition.

HOME-ECONOMICS WOMEN IN COMMERCIAL POSITIONS.

So frequently are women trained in home economics induced to accept commercial positions that it is with difficulty that the higher positions in college home economics are filled. Says John Willy, addressing the Illinois Home Economics Association, October, 1921:

Two years ago I discovered in the largest hotel in the world (the Pennsylvania-Statler of New York) a dietitian who compiled the menus for 800 employees, the management believing that, if employees were rationally fed and the menus prepared by a trained person, there would be more content and less waste. The experiment was so satisfactory that dietitians are now in all of the five hotels of the Statler chain. In other hotels that have followed suit, in department stores, in hospitals, and in some of the large industrial catering plants. It was proved in the Pennsylvania Hotel that the employees were benefited; they were made more efficient by the wholesome meals prescribed by the dietitian. Not only that, but the hotel saved thousands of dollars a year in the economy that prevented waste.

Many hotels now employ specially trained dietitians in all of the kitchens and in the management of their tea rooms. Owners of restaurants and cafeterias seek home-economics women to manage the food problems.

It is a significant fact that such organizations as the New York Wholesale Grocers Association and the National Wholesale Dry-goods Association should invite home economists to address them.

Canning associations, bakers, and manufacturers of household supplies and utensils are asking the aid of home economists in interpreting the wants and needs of home-making women.

HOME ECONOMISTS IN BANKS.

Home-service divisions in banks, in charge of home-economics women, have increased. While the Society for Savings was the first institution to recognize this possible service to be rendered by trained

home-economics women, six banks in Boston now have such employees, and in many cities there are one or more positions of like nature.

HOME ECONOMICS AND STATE INSTITUTIONS.

An unusually valuable piece of work was done by the home-economics department of the University of Kansas, wherein the department conducted an intensive study of the nutritional condition of the inmates of a State eleemosynary institution and presented recommendations as to changes in diet, kitchen management, and food purchases.

Acceptance of the recommendations resulted in a marked improvement in the nutritional conditions of the inmates of the institution.

This type of service might with benefit be assumed by the home-economics departments of many State universities and land-grant colleges.

The trend of thought in regard to undergraduate courses for home-economics women is illustrated by the following quotation, given in an address before a home-economics association by Miss Bertha Terrill, of the University of Vermont:

I believe strongly, moreover, in the dwarfing which must result from crystallizing interest in study upon a given subject or group of subjects too early. An undergraduate student should be an octopus, reaching out hungrily in every possible direction with the eagerness, which gives zest, of not knowing in which direction the richest food supply is coming. This much conceded, I am wholly ready to give place with all my heart to a reasonable amount of such applied material as courses in home economics present, believing that if properly presented, they quickly produce interest in, and desire for, the more abstract material. But I can not believe that undergraduate work in home economics should ever be allowed to be so specialized that, later, teachers of foods have no proper conception of clothing, or vice versa, and I believe that our departments to-day are weakened by the presence of some thus wrongly limited.

This reaction against the excessively specialized courses of instruction is now marked. It has become evident that one reason for the dearth of home-economics women, prepared for the larger executive educational positions, is that too many have been narrowed in their educational viewpoints by a too early overspecialization in some one phase of home economics.

LAND-GRANT COLLEGE ASSOCIATION.

During this biennium home economics received additional recognition from the Land-Grant College Association in that it was made one of the three coordinate divisions of that association, ranking equally with agriculture and engineering.

THE MERRILL-PALMER SCHOOL.

The Merrill-Palmer School, of Detroit, promoted various experiments in home-economics education through cooperation with existing organizations.

During the year 1920-21 especial emphasis was placed upon instruction for continuation classes. Owing to the fact that a continuation class is subject to constant change, due to new girls entering employment and becoming subject to the law requiring school attendance in continuation classes, and other girls passing from the school because of reaching the legal age, it was proved that most successful teaching in home economics consisted of a series of independent lessons. For these lessons such topics were chosen as the purchase and care of hosiery; the comparative cost and wearing qualities of different types of underwear; and the hygienic and artistic care and arrangement of the hair.

Because of available funds it was possible to purchase and exhibit to the girls many types of stockings, garments, etc., that they might make comparative studies and thereafter be able to make intelligent purchases.

The major experiment of 1921-22 in the Merrill-Palmer School was in the conduct of a nursery school. The children were from a good class of homes and some tuition was paid. The children were not admitted when under 20 months of age nor above kindergarten age. Thorough physical and psychological examinations were made by competent physicians and trained psychologists.

The children were brought in the morning and returned to their homes in the evening. Parents were given expert advice in regard to the psychological as well as physiological care of the children. Six senior students from the Michigan Agricultural College were detailed from the college to the Merrill-Palmer School for special courses in child care and training, for which they received college credits.

This work exactly conforms to the will of the donor of the foundation supporting the school. It differs from the so-called nursery schools of England in that it is designed actually to train the children in the formation of behavior habits while training young women in the problems of motherhood.

There is a rather widespread interest in the grouping of children below kindergarten age for instruction and care, but at present many of these experiments do not assure skilled oversight by psychologists as well as by physicians, nurses, and teachers.

PROFESSIONAL COURSES FOR TEACHERS AT JOHNS HOPKINS UNIVERSITY.

The professional needs of the home-economics teachers were outlined to Doctor Buchner, director of extension courses, Johns Hopkins University. As a result, two courses in home economics were given for home-economics teachers in Johns Hopkins University in the summer of 1921. These courses were limited to methods of teaching home economics. They were continued in the summer session of 1922; and one course in textiles and clothing, in addition to the methods courses, was given. During the school year 1922-23 there will also be an extension course for home-economics teachers in Johns Hopkins University. Sixty per cent of the teachers in the home-economics department in the Baltimore public schools have attended these courses.

HOME ECONOMICS IN THE DEPARTMENT OF AGRICULTURE.

Knowledge relating to home economics is promoted by the Office of Home Economics, the Extension Service, and the Dairy Division of the Department of Agriculture. In the first, through the published results of research, conducted in the Office of Home Economics; in the second, through the activities of National, State, and county home demonstration agents; and in the third, through better-milk campaigns and by assistance given to schools establishing milk lunches for school children.

The following report of home-economics work in the Department of Agriculture appeared in the Journal of Home Economics in May, 1922:

The cooperative extension work in agriculture and home economics, formerly conducted through two extension offices, one for 15 Southern States and the other for 33 Northern and Western States, is now under the direction of one office. For the coming year the county agent activities, home-demonstration work, and club work with farm boys and girls will be part of a unified program.

Depressed economic conditions in the Southern States led the 851 white county agents and the 154 negro agents to give an unusual amount of time to marketing problems and assisting in the organization of 2,031 cooperative associations for buying and selling. These agents reported 230,819 field demonstrations, with crops by adult farmers and boys on 2,274,534 acres. The home-demonstration workers, employed in 567 counties, reported that, due to the work of 240,000 club girls and women, over 14,000,000 pounds of meat products were cured, 228,500 cans of meat were conserved, and 14,500,000 quarts of vegetables and fruits were canned, besides a large quantity of jelly and other preserves and dried and brined products. Poultry and eggs, valued at \$2,500,000, were produced, and over 3,000 family cows were placed on farms.

In the Northern and Western States home-demonstration projects were conducted in 17,399 communities, and over 1,330,000 people were reached. The total enrollment in boys' and girls' club work was 216,479. The agricultural colleges offered 730 scholarships and conducted short courses for 3,383 boys

and girls. Significant of the way in which club work stimulates a desire for more instruction is the fact that over 1,800 former club members were enrolled during 1920 in the four-year courses in agriculture or home economics at various agricultural colleges.

The Office of Home Economics has increased its experimental work on food value and selection, meal planning, food requirements of children, cooking and canning processes, and relative efficiency of different fuels in food preparation. Some studies were also made on the selection, repair, and care of clothing and household equipment.

The experiment stations in Alaska and the insular possessions have continued the work for diversification of agriculture in their respective territories.

FEDERAL BOARD FOR VOCATIONAL EDUCATION.

In addition to the general administration of the Federal aid granted to vocational home-economics education in the several States, the Federal Board carried out a noteworthy study in home-economics education for negro girls and women in the Southern States. The results of this study will appear as a Federal Board for Vocational Education bulletin. It will contain the findings of the investigator of the present status of home-economics education, a statement of desirable courses and conditions for teaching this subject, and recommendations for the future administration of home economics for colored girls and women in Federal-aided educational institutions.

The investigations were in charge of Miss Carrie A. Lyford, of Hampton Institute.

BUREAU OF EDUCATION ACTIVITIES.

During the two fiscal years, 1920-21 and 1921-22, the Bureau of Education published five circulars on home-economics education, as follows: Home Economics Circular No. 9, Junior high-school courses in home economics; Home Economics Circular No. 10, Present status of home-economics education; Home Economics Circular No. 11, Equipment and rooms for home-economics departments; Home Economics Circular No. 12, State certification of home-economics teachers; Home Economics Circular No. 13, Home economics for rural schools.

Bureau of Education Bulletin, 1922, No. 5 was prepared during this period, but left the press July 1, 1922, and the free supply of 12,500 copies was exhausted by September, 1922.

A series of conferences of supervisors and teachers of home economics was conducted. These conferences were held in the following cities: New York City; Chicago, Ill.; Kansas City, Mo.; Denver, Colo.; Salt Lake City and Logan, Utah; Spokane, Wash.; Portland, Oreg.; San Francisco and Los Angeles, Calif.

Representative home-economics women from 33 States participated in these conferences, and the conclusions reached by them have been embodied in a home-economics publication which will be known as Home Economics Circular No. 14.

Home economics was represented in the educational surveys conducted by the Bureau of Education in Wilmington, Del.; Wheeling, W. Va.; Elizabeth City, N. C.; and the State University of Arkansas.

Visits to home-economics departments were made in 9 State universities, 9 agricultural colleges, 5 State colleges for women, 20 normal schools, and 28 of the larger city systems.

HOME ECONOMICS IN FOREIGN COUNTRIES.

In the women's college at Ahmedabad, India, home economics is taught in the vernacular, and, of necessity, must be modified to meet the conditions existing among a vegetarian people.

In Constantinople, home-economics education was advanced by Mrs. Alice P. Norton, in the College of Constantinople.

In China, Misses Gunther and Balderston, of Teachers College, Columbia University, New York City, lectured at Canton Christian College, and investigated educational conditions in China.

Arrangements were completed for the Methodist Missionary University in Peking to have one permanent teacher of home economics, and, in addition, have the services of Miss ~~Mc~~ McLain as adviser for two years.

M. le Chanoine Dupin, almoner of the higher normal course in home-economics instruction, at Paris, in discussing the then proposed international meeting of home economists, states:

In France one does not conceive of home-economics education as a simple initiation into the things of practical life, but as a preparation of the woman for her triple rôle of wife, of mother, and of mistress of the house.

Under the education act of 1918 (England), local educational authorities are required to make provision for "instruction in cookery, housewifery, dairy work, handicraft, gardening, and all such subjects as the board declares to be subjects of practical instruction."

There were 5,840 centers maintained in 1919-20 for giving instruction of the above types.

The Ministry of Public Instruction (of Austria) has introduced the teaching of home economics in the last class of all primary schools. In 35 half days of cookery the girls of 14 years learn the most important methods of conservation and buying for the house, and the use of milk, eggs, fat, flour, meat, rice, potatoes, legumes, and green vegetables. They are taught the composition of foods, the nutritive value, the price, and quality. In a two-hour period each week the girls become familiar with materials such as clothing and furnishings, as well as with the principles of sanitation, physiology, and child hygiene. The teaching of home economics must give more than the knowledge of the operation of the house; it must show young people that cookery, sewing, and the

whole technique of daily life are necessary steps in expressing the highest social instincts. It has the same importance, whether the old familiar household is to remain or the common household, of which socialists dream, is to come. That training must prepare the girls to use the results of modern progress in the home to save human energy and time and to permit them to attain other cultural ends.

These views caused the reform of the higher girls' schools also. Besides the gymnasium, which is the same for girls and boys, there arose a new type of higher school for girls, the *Frauenschule*. The type is new, although the name has been used previously in Germany. But in Germany *Frauenschule* is a course of only practical instruction which girls enter after the lyceum. The Austrian *Frauenschule* receives pupils in the fourteenth year and they remain till the eighteenth. Required subjects are the same ones taught in other schools of the same grade, but the method of teaching is different. Teaching in cookery, sewing, and nursing is in connection with natural science, mathematics, and all other required subjects, not in addition to them. The girls instructed in the *Frauenschule* will be pioneers of the housekeeping of the future. Spirit and soul will dominate all technical knowledge when woman conceives the importance of her social mission, which is to strengthen and improve society by choosing wisely materials necessary for its upbuilding. Thus inanimate things will be made to react to the development of humanity.

HOME-ECONOMICS ASSOCIATION.

A vigorous campaign for the organization of State home-economics associations was staged by the American Home-Economics Association, with the consequent result that strong home-economics associations are now maintained in almost all of the 48 States and the District of Columbia. These associations hold annual meetings and frequently appear as part of the State teachers' association.

Four meetings of the American Home-Economics Association were held in the biennium. These were at Colorado Springs, Colo.; Atlantic City, N. J.; Chicago, Ill.; and Swampscott, Mass.

These meetings were divided into sections in order that topics of especial interest to home-economics teachers, dietitians, food-research workers, and institutional managers might be presented.

The International Institute of Home Economics held a meeting in Paris in April, 1922. This association is scheduled to meet once in five years, but owing to the war the regular meeting was delayed. The next meeting will be called in either three or four years in a place to be decided later.

Those in attendance represented most of the European countries and were mostly officials connected with the educational offices of the various countries.

The United States had no official representative, but the American Home-Economics Association was represented and this representative was seated with the delegates from other countries.

CHAPTER XV.

KINDERGARTEN EDUCATION.

By JULIA WADE ARBOT.

Specialist in Kindergarten Education, Bureau of Education.

CONTENTS.—Increase in kindergartens—Kindergarten legislation—Kindergarten training schools—The nursery school—Problems relating to school entrance and retardation—Recommendations in surveys in regard to the kindergarten—The kindergarten at the Pan-Pacific Educational Conference.

INCREASE IN KINDERGARTENS.

There has been a material increase in the number of kindergartens and in the number of kindergarten children enrolled in the public schools during the year 1919-20 in spite of after-war conditions. During the war there was no increase in kindergartens throughout the United States. Since the war, increased school budgets, due to building programs and new salary schedules, have tended to make school boards conservative about opening kindergartens, yet the latest statistics show an increase of 37,811 children in kindergartens; and this increase is distributed over 31 States. California leads with an increased enrollment of 7,296 children; New Jersey is second, with 4,313; Minnesota and Michigan tie, with 3,978; Iowa is fourth, with 3,631; and Massachusetts fifth, with 2,227. There has been an increase of 9,246 children enrolled in 255 new kindergartens in 189 towns under 2,500 population in 22 States. Of these States, California leads with an increase of 56 kindergartens and New Jersey is second with 45. It is significant that these States that are leading in the establishment of kindergartens rank, respectively, 2 and 4 in the Ayres scale. Michigan reports 35 new kindergartens, Nebraska reports 32, Minnesota 26, and Kansas, 14. This steady growth of kindergartens in small towns indicates that the kindergarten is being accepted as the right of every child in city and country instead of merely being regarded as a welfare agency for children living under abnormal conditions in large cities.

The extension of kindergartens is due in no small measure to the earnest efforts of women's organizations. The Congress of Mothers, the General Federation of Women's Clubs, and the League of Women Voters all have the extension of kindergartens as one phase of their education program. In 24 States State kindergarten associations have been formed which are successfully uniting all the efforts in the

State for the extension of kindergartens. The Wisconsin State Association employs the full time of an experienced kindergarten teacher who serves as a field worker and who is not only helping to extend kindergartens but also to improve the quality of kindergarten work.

KINDERGARTEN LEGISLATION.

The Wisconsin State Association, cooperating with other organizations in the State, has been successful in passing a mandatory on petition law which reads as follows:

The school board or board of education of any school district, however organized, union free high school districts excepted, shall upon petition of the parents or guardians of 25 or more children more than 4 and not more than 6 years of age establish and maintain a kindergarten in charge of a legally qualified kindergarten teacher for the instruction of said children. In case such district maintains two or more school buildings the parents or guardians heretofore mentioned shall reside not more than 1 mile from the building in which it is proposed to establish the kindergarten. When a kindergarten shall have been established as hereinbefore provided, it shall constitute a part of the common public schools of the district, and the taxes for maintenance of such kindergarten shall be levied and collected in the same manner as other taxes are levied and collected for the support of the common schools. When a kindergarten shall have been established, it shall not be discontinued unless the enrollment for the preceding year shall have been less than 15.

New kindergarten legislation has also been enacted in Connecticut, Pennsylvania, Kansas, and Oregon. The Kansas law makes the establishment of kindergartens mandatory upon petition in cities of the first class with populations over 18,500. The Pennsylvania law permits the establishment of kindergartens "upon the petition of parents or guardians of at least 25 children between the ages of 4 and 6 years, residing within the district and within 1 mile of any elementary school building situate in such district." Local boards of education are authorized to "levy an annual tax for the establishment and maintenance of kindergartens, not to exceed 2 mills on the dollar of the assessed valuation of taxable property in the district. Such taxes, when levied, shall be kept in a separate fund and shall be used only for the purpose for which they were levied." In each of the four States that have enacted kindergarten legislation a section of the law deals with the certification of kindergarten teachers. In Kansas, Pennsylvania, and Oregon all kindergarten teachers must have completed a two years' course of kindergarten training in an accredited kindergarten training school. Such legislation in regard to the certification of kindergarten teachers is an important factor in the standardization of kindergarten work.

KINDERGARTEN TRAINING SCHOOLS.

The increased number of teacher-training institutions that give kindergarten instruction is evidence of the increasing recognition of the kindergarten as a necessary part of public education. The

institutions now giving such instruction number 158. Of these, 83 are State normal schools or colleges and universities, 23 are city institutions, and 52 are private. Those supported by State funds include the southern branch of the University of California; the State colleges for women in Florida, Mississippi, South Carolina, and Texas; the University of Nebraska; Ohio University; and the University of Utah. The city institutions include Hunter College, New York; the Municipal University of Akron, Ohio.

The 53 private institutions range from small private kindergarten training schools to colleges and universities of the highest rank. This group includes the following institutions: Atlanta University (colored); the University of Chicago; Drake University; Goucher College; Wellesley College; New York University; Omaha University and Nebraska Wesleyan University; Columbia University; Oklahoma City College; Temple University; George Peabody College for Teachers; Brigham Young University; and Baylor College.

Another evidence of the incorporation of the kindergarten as an integral part of the school is the establishment of kindergarten primary courses in many institutions, in the place of a special kindergarten course. This tendency to train teachers for both the kindergarten and early elementary grades is a recognition of the fact that the period of 4-8 years in a child's life is psychologically one period and that all teachers of the children of these ages should have the same training. In many institutions this course is now a three-year course, and some institutions are offering a four-year course leading to a degree. Because there are many problems relating to the formulation of such a course, a committee of the International Kindergarten Union has prepared a three-year minimum standardized course of study for kindergarten primary training schools.

THE NURSERY SCHOOL.

Not only is kindergarten work being related in an organic way to the work of the elementary schools through kindergarten-primary courses in training schools, but the objectives of kindergarten education are being strengthened by a new emphasis upon the pre-kindergarten period. Such laboratory experiments as Watson has made at Johns Hopkins University, and the nursery school experiments which are being carried on in England and in this country, are stressing the importance of education in these early years. Child-welfare workers are accustomed to assert that the most neglected of childhood is the preschool period. By "preschool period" is usually meant the years from 2 to 6. The kindergarten lies within this period, 4 to 6 being commonly accepted as the kindergarten years. While the kindergarten is becoming more and more a part of the public-school system, the fact that such a term as "preschool period"

ignores the kindergarten means that there is still an urgent need for educating the public in regard to the importance of the beginnings in education.

In a recent article entitled "Preschool education," by Mrs. Woolley, of the Merrill-Palmer School, the following statement is made:

Any kindergarten teacher, or indeed any intelligent adult who has come into intimate contact with large numbers of children of 5 years, knows how distinct character traits and levels of ability are by that age. Physical habits, mental habits, and elements of character and personality are already formed. Even at 5 the variety of individuality found among children is almost as great as that among groups of adults. It is doubtless true that many of these traits are modifiable; but are they indefinitely modifiable, or are certain trends already established which are permanent in their influence? Even though they be modifiable, does the establishment of given types of reaction have a permanent influence on personality? Modern psychiatry and psychology are answering the above questions by assuring us that the experience of the first few years of childhood and the types of reactions set up at that time may be determining factors throughout life. Decisions and attitudes of adults, though they do not themselves realize it, may be profoundly influenced by habits of response set up before the age of 5 years.

Not only is the nursery school movement emphasizing the importance of early education, but valuable experiments are being made in relation to the kind of education that should be provided for children in early childhood. The concept that the education of young children consists in the mastery of the technic of reading and writing and arithmetic is still generally accepted. The nursery school experiments are placing a new emphasis upon more important phases of education in the early years.

The English education act of 1918 authorized local authorities to provide "nursery schools for children over 2 and under 5 years of age, or such later age as may be approved by the board of education."

In an address on "The new interest in education in Great Britain," Sir Auckland Geddes, the British Ambassador, made the following statement about the establishment of nursery schools:

One of our ideas has perhaps been more unsparingly ridiculed than the rest, the proposal to found nursery schools. I notice the ridiculers are either childless or else are the sort of people who maintain at considerable expense in their own homes the very sort of nursery school which we are setting up for the use of all. It is easy to make merry and to draw pictures of tiny tots with horn-rimmed spectacles tolling with great tomes, but the facts are otherwise. The purpose of the nursery school is not even to teach the three R's, but by sleep, food, and play, provide the opportunity for little children to lay foundations of health, habit, and responsive personality, which is just what every nursery in the world is supposed to be doing.

Two experiments in England have attracted wide attention—that of Miss McMillan in London and Miss Owen in Manchester. These nursery schools have been described in two books: *The Nursery*

School, by Margaret McMillan; and Nursery School Education, edited by Grace Owen.

Miss McMillan states that on examination one-third of the nursery children were found to have physical defects. In describing the work of the school she says, "Once inside, the child comes under the influence of the great healers—earth, sun, air, sleep, and joy." But Miss McMillan believes that the nursery school has a broader function than that of health. She writes, "I assume in the start that the nursery school will, if successful, change and modify every other order of school, influencing it powerfully from below."

In the introduction to Nursery School Education, Miss Grace Owen also emphasizes the relation of the nursery school to—

the national effort to raise the physique of the people. * * * When it is considered that the rate of mortality during these years is higher than that of any period except the first year, it is obvious that continued neglect by the State would be fatal to the whole national effort to raise the physique of the people. The nursery school, open to all children over the age of 2, will bridge this gap. By means of it, regular supervision, the prompt treatment of ailment and disease, the necessary attention to right food, clothing, personal habits, and health surroundings are all made possible.

But Miss Owen regards the work of the nursery as educational. She says:

It may also serve the wider cause of education. It is not hampered by the traditions of a past generation. It is free to work out its own salvation. It has a new opportunity. If those who are responsible preserve simplicity of spirit and an open mind, it may make an important contribution to our knowledge of education, because it will be a testing ground of the fundamental educational doctrines of to-day. Moreover, by its insistence on cooperation with the home, its interests in neighborhood activities, and its constant function of putting the individual family in touch with the various agencies for child welfare, it will tend to strengthen the movement toward bringing all education into closer touch with real life.

Some interesting experiments are being carried on in this country, and Miss Owen has contributed to the work in two institutions—the Merrill-Palmer School of Detroit and Teachers College, Columbia University.

For many years day nurseries have been conducted in congested portions of large cities, where the children of working parents were cared for during the day. These nurseries have been largely concerned with the physical care of young children and can in no sense be called nursery schools. There are also a number of private institutions where children of preschool age attend school for a session varying from two to three years in length. While many of these schools are conducting experiments on a scientific basis, such as the preschool laboratory of the University of Iowa, they can not be classed as nursery schools because of the length of the session. The

few hours of the morning do not give enough opportunity for the practice and study of all the habits related to food, sleep, exercise, etc. The program for a nursery school must include the following: (1) An all-day schedule; (2) a plant, equipment, and régime based upon scientific knowledge; (3) an adequately trained teacher; (4) mental and physical tests of all children; (5) supervision and records of mental and physical development.

The Merrill-Palmer School, Detroit, Mich., the Bureau of Educational Experiments, New York, and Teachers College, New York, are conducting experiments that have the qualifications listed above for a nursery school.

Each one of these experiments is working out particular problems. Mrs. Woolley, assistant director of the Merrill-Palmer School, has this to say of the objectives of the school:

The general plan is the establishment of a nursery school for children between 2 and 5 years of age, and the use of the school as a training center for young women students. Our little experiment, with only 30 children, is of slight importance unless it demonstrates that the extension of the educational system downward to two years, upward to include all young women in the care and management of small children, and outward to furnish assistance to mothers in their immediate concrete problems, is both desirable and practicable.

Miss Elizabeth Cleveland, director of girls' activities, Detroit, says:

It looks forward to women better trained in the duties of motherhood. It may be possible that cooperative neighborhood nursery schools will grow up in which the mothers themselves will be the teachers, relieving each other of many of the tasks that could be done for a group as well as for one or two, and leaving more time for the close communion between mothers and children, which is theirs by divine right.

A graduate of Miss Grace Owen's school, Manchester, England, is the teacher of this nursery school.

The Bureau of Educational Experiments, New York, states the objectives of their nursery school experiment as follows:

We did not set about our task of caring for children from 15 months to 3 years of age because of the economic situation of working or professional mothers—though this situation is distinctly a part of our problem. Our answers are not in terms of social or economic need. Our first answer is in terms of educational need: We feel that the educational factors in the environment for babies need study and planning as much as and perhaps more than those in the environment of older children. Our second answer is in terms of research: We feel the need of fuller scientific data concerning children's growth—growth of every sort that is measurable or observable.

All the physical side is thoroughly incorporated into the nursery procedure and thoroughly recorded. But this is not the field where experimenting is taking place. We are not experimenting in diets nor in the amount of clothing nor in the countless physical details to which we attend. We are experimenting in the equipment and situations which lead to muscular coordination, to experimentation, to purposeful activities, to emotional stability. We are noting for instance, the amount and kind of climbing a 2-year-old

can do, the degree and kind of response he makes to various sense stimuli, the amount and kind of contact with other children and with adults that he can bear without strain, and the kind of use he makes of his body and of all his surroundings.

Miss Grace Owen was brought over from England by the department of lower primary education, Teachers' College, to give a course in nursery school education at the Teachers' College summer school session of 1922. One of Miss Owen's graduates has been conducting a "toddlers' class" in the Manhattanville day nursery since May, 1922, and this class is used for demonstration purposes for the students of Teachers' College.

PROBLEMS RELATING TO SCHOOL ENTRANCE AND RETARDATION.

One of the problems of the elementary school is the reduction in the number of failures. The largest number of failures is in the first grade. In the average city approximately one-fourth of the children in the first grade have to repeat their first year of school work. The school has failed to provide conditions that will meet the needs of children in the beginning of school life because it has neglected to take into consideration the preschool life of the child. An effort to make a better adjustment to school conditions has been made by a number of agencies in New York City. This experiment is described in a pamphlet entitled "Examination of Preschool Age Children" and is issued by the health service of the New York County Chapter, American Red Cross. The purpose of this experiment is given in the words of Dr. Ira S. Wile, chairman of the committee on education of the Civic Club of New York:

If schools are to become the real centers for the activities relating to the conservation of childhood it is potent that the time of entrance into the school system should present the strategic period for effective accomplishments.
* * * The physical and mental examinations of every school child at the time of his registration are essentials for a completely humanized system of education.

Eight schools in congested districts in New York were selected for the experiment. The work was done in the month of June with the children who were to enter school in September for the first time. A card was sent home to the parents of these children and contained this statement in relation to the information given: "Have your child examined at once! Do not delay! Start him right. The best time to take care of a child's health is before he enters school."

Dr. Jacob M. Sobel, of the Bureau of Child Hygiene, makes the following statement:

Approximately 70 per cent of the children canvassed, either through written communication or personal approach, were brought to the schools. Of this number, 75 per cent were accompanied by their parents, and 25 per cent by

older school children. Of the 1,061 children examined, 33.3 per cent were found normal and 66.7 per cent with physical defects; of the latter, 25.2 per cent were children who had defective teeth as the only defect found. The majority of the children examined were in the age grouping of 5 and 6 years. The study corroborates former experiences, as regards the need of intensive work among children of the preschool age, for the correction of remediable physical defects, particularly defects of tonsils, nasal breathing, and nutrition. It also emphasizes the fact that the public, as a whole, has not yet realized the importance and significance of the ill effects of physical defects at this age, and the importance of their remedy from the standpoint of health and schooling. During the summer months, in so far as conditions permitted, the nurses of the Bureau of Child Hygiene made necessary home visits and endeavored, so far as possible, to secure the removal of all defects found, and to extend into the homes such educational methods as were warranted by the findings. It was also agreed that the American Red Cross provide full-time dental hygiene service for the preschool age children examined in both the East Harlem and Henry Street districts. The work began during the first week of the medical examinations in June.

In regard to the mental testing the following statements are significant:

The work of examining 1,000 preschool age children who would enter the kindergarten or 1A grade in September was undertaken by members of the New York State Association of Consulting Psychologists in the month of June, 1921. These children were to attend eight different public schools. The purpose of the psychological examination was to place in the hands of school principals data which could be used in the scientific classification of these children. The significance of this experiment in extensive individual mental scaling is obvious to those cognizant of the possibilities of the psychological examination of children. While the use of intelligence scales does not determine the complete mental status of a child, it serves as an excellent basis of initial gradation. The completeness of the exposition of this phase of the experiment places it in the category of constructive research in educational psychology.

The result of the mental testing is as follows:

The range is from less than 3 years to over 7 years. The median age lies in the range from 5 years to 5 years 3 months. The median age for the kindergarten children is found in the range of 4 years 6 months to 4 years 9 months. For the children entering first grade the median is in the 5 years 3 months to the 5 years 6 months range. While none of the children examined had a chronological age of less than 4 years, a large proportion of them were unable to make as high a score as the average 4-year-old child. There were 101 who fell below the 4-year level; they ranged in mental age from 2 years 6 months to 3 years 11 months. Practically 25 per cent of the children were below the standard of ability usually supposed necessary for attendance at kindergarten. On the other hand, many of the children were exceptionally capable. Twenty-four of them had a mental age of 6 years or more. Two of them were at least 7 years old mentally. The range of mental ages of the first-grade children is the same as that of the kindergartners. Some of them are less than 3 years old mentally. Others are above 7 years. Approximately 30 per cent are below the 5-year level. There are 157, or about 28 per cent, who grade above 6; of these, 15, or nearly 3 per cent of the total, have a mental age of more than 7 years. It is impossible to express in figures the greatest failure of our

present method of organizing classes. The habits of failure which are developed when we try over and over to get a child to that which he has not the ability to accomplish may be important factors in later economic inadequacy. It is also impossible to estimate the economic loss in the case of a retarded bright child.

There is, however, a fairly direct measure of loss due to the present system in the number of times we require children to repeat work over which they have once gone. Let us take the enrollment of our school district as an example. The enrollment numbered last year 13,466, and each of the eight grades had its representative. But eight years in school did not mean that a child had advanced to the eighth grade. In fact, more than one-third of the pupils had been in school a longer time than was supposed necessary to reach their present grade standing. Approximately 5,000 children had been compelled to repeat at least one term's work.

Let us disregard those who failed only once, twice, or three times, and consider only those who had failed four or more times. We have the following numbers of them: Four hundred and ninety had failed four times; 266, five times; 162, six times; 67, seven times; and 80, eight or more times.

The cost of giving instruction to a child for a term has been computed. We know how many dollars are required for every child for each term which he spends in our school. Let us say that in round numbers it is \$50 per year or \$25 per term. Then each repetition of a term's work by a pupil means an additional expenditure of this amount. The expenditures for the repetitions of the children who are now enrolled in the district would amount to \$125,000. We must remember that we have not included those children who have failed only once, twice, or three times. Since this is the result of one district, we can readily realize that the annual financial loss from failures and repetitions must be enormous.

But the loss of confidence, the sense of failure, and the hopelessness of these children are more important. Such conditions are not measurable in dollars and cents but do not become less important because of that fact. It is obvious that the children can not be at fault. Our school procedure must be. It palpably fails to meet the needs of nearly one-half of the children. To help the situation by organizing classes on the basis of the ability of the children is a great step in advance. We recognize a child's capacity and then provide the environment most suited to his development.

Some of the advocates of grading according to intelligence have insisted that we allow the bright children to make more rapid progress through the grades. If a child can do all the work of the present eight grades in four years he should be allowed to do so. In this contention the underlying assumption is that the present curriculum is eminently satisfactory and necessary for the child's future welfare. Therefore, it is said, the sooner a child gets the routine training offered in the grades, the better will he be equipped for further study. But there is a possibility that a revision of the curriculum would be worth consideration. We know that all children can not be expected to do the required work in 8, or even in 10 or 12 years. Are we then to keep the children who can not do that work in 12 years at the same scheme of things as we provide for those who can do everything required in 4 years? Is it not possible that a different kind of work would be better for these children? And is it not possible that even for the brightest children a modification of the schedule might be worth while? It seems to us that we might answer in the affirmative. The children need a richer, more diverse course of study if they are capable of doing the required work in less than the schedule time. If they have not the ability to carry on the regular assignments, they need a modification of them; they need an adaptation of their aptitudes, potentialities, and possible functions in the later years of their lives.

This notable experiment in New York City suggests Miss McMillan's prophecy of the effect of the nursery school on traditional education:

It will prove that this welter of disease and misery in which we live, and which makes the doctor's service loom bigger than the teacher's, can be swept away. It will make the heavy walls, the terrible gates, the hard playground, the sunless classroom look monstrous, as they are. It will give teachers a chance. The arrival of thousands of beautiful and strong children will break down the gates. Through the awful and grim corridors the light of joy as well as youth will pass.

On the problem of school entrance, Doctor Gesell, of Yale University, says:

The problems of preschool hygiene and of school entrance are inseparable and both in turn inseparable from the kindergarten. The whole matter of school entrance is, in the last analysis, one of hygiene. It should be conditioned primarily by standards of health and development and should be regulated by a policy of medical oversight and educational observation. Instead of unceremoniously and haphazardly admitting three millions of children and failing one-fourth of our first graders at the end of the school year, we should gradually reorganize the kindergarten and the primary school in such a way that the school beginner will be under systematic, purposeful observation. This means a gradual relaxation of our present zeal to teach him and the substitution of a much more wholesome solicitude, namely, one to safeguard his health and to understand his psychology. In the first grade all gives way to a hasty eagerness to instruct him to read and write. Even in the kindergarten we are in danger of forgetting Froebel's suggestion: "Wouldst thou lead the child? . . . Observe him and he will show you what to do." Such a policy of intelligent observation of the children is not incompatible with the program of the progressive kindergarten of today. It simply gives to these programs a double trend, one which is educative and another which is interpretative. Such a policy will inevitably lead to a hygienic rationalization of school entrance. The kindergarten will become the recruiting station and the development battalion of our vast school army.

Not only is the kindergarten becoming recognized as an important factor in the control of school entrance, but two recent studies show that the kindergarten tends to reduce retardation in the grades. In nine of the public schools in Louisville, Ky., a study has been made of the effect of kindergarten training in the primary and upper grades. R. J. Bell, principal of the F. T. Salisbury School, makes this report:

The records compiled represent 3,064 nonkindergarten children and 1,497 kindergarten-trained children from nine of the Louisville, Ky., public schools, all of which are listed below, showing by schools a percentage comparison of the points under consideration. The percentage of failure among kindergarten pupils is in all schools very much lower than among nonkindergarten children. It is also shown in the table that the per cent of retardation in all of the schools is much lower among the kindergarten group than it is in the nonkindergarten group, while the reverse condition prevails with regard to acceleration. In consideration of initiative and responsiveness the results obtained in each case

are favorable to the kindergarten group, except in the case of School No. 2, where the kindergarten children are 1.1 per cent lower in responsiveness than the nonkindergarten children. It seems clearly demonstrated in the foregoing that kindergarten training seems to reduce failure, retardation, and withdrawal and at the same time to increase the possibilities of promotion, acceleration, initiative, and responsiveness. The effects of kindergarten training as shown by the investigation above prove conclusively that the broader the experience gotten early in life the more certain is the child to remain interested and active in his school work and the more capable he will be in the inauguration of problems of his own. He is less liable to fail of promotion and is more likely to remain one of a group of accelerated or normal children. He will respond more readily to situations confronting the class and individual child and will manifest greater initiative in the creation of situations or the elucidation of conditions.

RECOMMENDATIONS IN SURVEYS IN REGARD TO THE KINDERGARTEN.

In a survey of the New Bedford schools, Dr. Spaulding, of Yale University, has published a study of the influence of kindergarten training on advancement through the grades. He states that 49.4 per cent of the pupils reaching the sixth grade within strictly normal age had entered school in the kindergarten. Of the children who were retarded one year or more, only 17.6 per cent had started in the kindergarten. Dr. Spaulding says:

Comparatively late entrance unquestionably handicaps New Bedford children from the very start; a study of the figures indicates that this handicap averages approximately a year. And the handicap continues throughout the school life of the children, with all its serious effects on the extent of their education and their continuance in school into the higher grades and the high school.

Dr. Spaulding not only considers the kindergarten a means of reducing retardation but also stresses the importance of kindergarten training for foreign children. He says:

Assuming that all children whose native tongue is English speak the language well on entering school, over 60 per cent of the New Bedford children begin their school careers with serious language handicaps, such as the children of communities largely English speaking do not suffer. The kindergarten is the best place to begin the removal of these language handicaps. Probably more can be accomplished in this during a kindergarten year than in any subsequent year. This initial achievement gives the child of foreign parentage something like a fair start.

Dr. Spaulding recommends that the kindergarten age be lowered to $4\frac{1}{2}$ years or 4 years, and that systematic efforts be made to enroll all children in kindergartens as a preparation for entering the first grade.

In a survey of the schools of Augusta, Me., Dr. Alexander Inglis, of Harvard University, commends the provision made by the school officials for kindergarten education, but suggests that it would be

a great advantage if all children who enter the first grade are given kindergarten training. In a recent study of retardation in the schools of Washington, D. C., it is recommended that kindergartens be established for all children of 5 years of age as one means of solving the problem. In Minneapolis children are required to have at least one quarter in the kindergarten before entering the first grade. In exceptional cases this rule may be modified by the assistant superintendent in charge of primary grades upon recommendation of the principal of the school.

The following recommendations were made by Dr. Thomas Alexander, of George Peabody Teachers' College, Nashville, Tenn., in a survey of the schools of Shreveport, La.:

Kindergartens should be gradually established as an integral part of the Shreveport system, upon vote of the board of education. Teachers who have had kindergarten-primary training should alone be employed. The kindergarten and first grade should be closely articulated. The transition from kindergarten to first grade should be natural and easy—made so by modification of the subject matter and methods of the primary grades so as to conform more in fundamental principles to some modern theory of education—a course based upon instincts, interests, and experience of childhood. There should be fewer children per teacher in the kindergarten.

Dr. La Rue, head of the department of education of the East Stroudsburg State Normal School, in a survey of the schools of Honesdale, Pa., also emphasizes the broader training of the kindergarten teacher. He says:

The teacher employed should be one who knows not only the essentials of kindergarten practice but of primary grade work as well. She and the first-grade teacher should regard themselves as mutual caretakers of the children who are undertaking the first two years of school work and classify them accordingly. Under present conditions every 6-year-old who enters must begin the reading exercises immediately. This is unfortunate, for some 6-year-olds are not ready to read. For some time longer they need the kind of education that comes through systematized play and handwork. Promotion from kindergarten to first grade should be determined chiefly by these two ages, physiological age as revealed by the condition and action of the various bodily systems and mental age as revealed by responses to standardized exercises.

Under the caption "Why have a kindergarten?" Dr. La Rue writes as follows:

So far as the development of the pupil is concerned, the kindergarten is probably conducted more socially, democratically, naturally, and skillfully than any other part of the school system from first grade through the university. It makes play equals of those whom caste would keep apart; but the educational environment makes them equals on a high level, not at all like the low-level equals of the street. Further, its protective and fostering value are large and varied; it protects the pupil's health and practices him in the habits of health; it protects his language from warping, contaminating influences, and makes correct language common instead of uncommon; best of all, perhaps, it protects his emotions from the regressive tendency toward anger, self-feeling, suspicion, isolation, sullenness, and nervousness, and fosters good nature, open-mindedness, sociability, self-confidence, cheerfulness, and the habit of being happy.

In 1920 a survey was made of the schools in Baltimore, Md. One of the recommendations was the extension of kindergartens. Since the survey 25 kindergartens have been opened and the board of education has decided upon opening 10 new kindergartens every year. In surveys made in Wilmington, Del., Wheeling, W. Va., and Sparta, Wis., recommendations were made to make the kindergarten an integral part of the public-school system.

THE KINDERGARTEN AT THE PAN-PACIFIC EDUCATIONAL CONFERENCE.

Because of the contribution that the kindergarten has made in the solving of the race question in the schools of Hawaii it was given an important place on the program of the Pan-Pacific Educational Conference held in Honolulu, August, 1921. The only official woman delegate from the United States represented kindergarten education. One session was given entirely to the elementary school and there were three speakers on the subject of kindergarten education. These speakers represented the International Kindergarten Union, the Free Kindergarten Association of Hawaii, and the Bureau of Education. In eight different addresses, given by delegates of other nations and by delegates from the United States, the kindergarten was recognized as an integral part of school education.

CHAPTER XVI.

THE SOCIAL STUDIES IN CIVIC EDUCATION.

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CONTENTS.—Introduction—The Pennsylvania program—Combination courses—Civics and the teaching of government—History in the schools—The civic virtues—The outlook for the social studies.

INTRODUCTION.

Twenty-five years ago "history and civics" was the term generally applied to the efforts of the schools to explain man in society. The amount of civics in the combination is indicated by the fact that the committee of seven of the American Historical Association, reporting in 1898 on the study of history in the schools, recommended that civil government be taught only in the course in American history in grade 12, the last year of the high school.

During the quarter-century since that date there has been a growing tendency to set up separate courses in the various subjects which have been developed in the universities. The advocates of these subjects have felt it to be their duty to urge that the disciplines for which they stood be given recognition in the curricula at least of the high schools if not further down in the system. As time went on separate courses were offered in civics, economics, sociology, and various combinations of these subjects.

As a reaction against this tendency, not only in the field now under consideration but in others as well, the educators who have been responsible for the organization of the curriculum have moved in the direction of grouping the work of the high school, under some such captions as the following: English, foreign language, mathematics, science, practical arts, and social studies. The term "social studies" has come into use during the past decade to designate the contributions made to school teaching by the fields of history, government, economics, sociology, and geography.

In an effort to express the unifying principle of the group called "social studies," a commission of scholars representing all of the special subjects involved have just issued the following statement:

The organization of the social studies in the schools should be determined by the purpose for which those studies are introduced. Their purpose is to enable our youth to realize what it means to live in society, to appreciate how people have lived and do live together, and to understand the conditions

essential to living together well, to the end that our youth may develop such abilities, inclinations, and ideals, as may qualify them to take an intelligent and effective part in an evolving society.

It is not practicable, with the statistical information now at hand, to give a definite and detailed account of the present condition of the social studies in the schools. It is possible, however, to point out the main currents of opinion and to illustrate the directions in which these currents are running.

Toward the end of the nineteenth century three committees of the American Historical Association—the committees of seven, of five, and of eight—made careful studies of the then educational situation and recommended courses of study covering both elementary and secondary grades. These reports still exert considerable influence in a large majority of the schools of the country. Most of the textbooks in history have been written and the college entrance examinations in history and civics have been set with a view to the courses recommended by them.

Later came the movement for the junior high school, which promised to change the character of the work that should be done in grade 9. With this movement came the community civics idea, and the growing demand that more civics, economics, geography, and sociology be offered. To meet these new conditions, the Commission on the Reorganization of Secondary Education of the National Education Association appointed a committee on social studies in secondary education. This committee, reporting in 1916 through Bulletin 28 of the Bureau of Education, offered a course of study for grades 7 to 12, inclusive. The report does not offer as definitely finished courses as did the committees of the American Historical Association; its authors chose rather to suggest and illustrate the principles on which new courses should be built up. The report was, in fact, a preliminary one published to secure discussion.

These two sets of recommendations are competing now, in friendly rivalry, for recognition by curriculum makers and textbook writers. It may be that a movement is gradually developing from the separate courses in history to a composite course in the social studies somewhat in line with the recommendations of the report of the committee on social studies. Two events have recently occurred which will illustrate the situation concretely. One is the publication of a 12-year course in the social studies for the State of Pennsylvania. The other is a set of recommendations made to the College Entrance Examination Board on the examinations to be set in history and civics. The description of the first is taken from the December, 1922, issue of *The Historical Outlook*. It was prepared by Dr. J. Lynn Barnard, of the State department of public instruction, and an active member of the committee on social studies in secondary education.

THE PENNSYLVANIA PROGRAM.

I. SOME FUNDAMENTAL PRINCIPLES.

This 12-year program has as its aim the training of the pupils in practical good citizenship, rather than the mere accumulation of facts for possible future use. It would define citizenship as participation in community life; and by community is meant any group, be it large or small, be it social, industrial, religious, fraternal, educational, or political.

It recognizes the fact that citizenship is a life process, a life experience, and that all are citizens. It believes that training in citizenship, in cooperative group life, must be like the training in English, continuous and cumulative throughout the 12 years of school life. From this standpoint the history and social science of the high school are not simply specialized studies, to be taken only as electives; they are a vital part of the making of intelligent, qualified citizens—the only justification of the tax-supported public-school system.

This program insists that history and social science are of coordinate rank and importance; the one giving us a perspective as to how mankind has slowly and painfully learned to lead the group life; the other giving us a sort of cross-section view of how man is now leading the group life, through the various organizations and activities that together constitute present-day civilization.

Further, there is distinct recognition of the various psychological stages through which our young citizens are passing, with corresponding adaptation of both content and method.

And finally, the impossibility of securing satisfactory results through the usual reciting-to-the-teacher method is accepted as beyond question. While the teaching process must be varied, the main dependence for success must be placed on the problem-project method, and on the constant breaking up of the class into smaller groups for the preparation of assigned work. The uncompromising nailed-to-the-floor desks must give way to comfortable chairs properly equipped for student use, supplemented in junior and senior high school by small tables around which the small groups can gather. In short, the classroom for social studies must become a laboratory, with book-laboratory equipment and resources. This change is fundamental and not a mere device as some would have us believe. It is an integral part of the school's training in cooperative democracy.

II. A TWELVE-YEAR PROGRAM.

The schedule proposed for the State course is as follows:

A. Elementary school.

1. History.

(a) Grades 1-3.

Part I. Anniversary days.

Part II. Indians, Esquimaux, cliff dwellers, early man—
Tree dwellers, cave dwellers, sea people, pastoral people.

(b) Grades 4 and 5—Stories of American history.

(c) Grade 6—European background.

2. Civics:

(a) Grades 1-6—Civic virtues (morals and manners).

(b) Grades 3-6—Community cooperation.

(c) Grade 6—Vocational cooperation.

B. Junior high school.

1. History:

(a) Grade 7—United States history.

2. Social science:

(a) Grade 8—Community civics.

(b) Grade 9—Vocational—Economic civics.

C. Senior high school.

1 History:

(a) Grade 10—European history.

(b) Grade 11—American history.

2. Social science:

(a) Grade 12—Problems of democracy.

History.—In the history of the first two grades the emphasis is placed on the Indian, both because he lends himself so easily to expression work and because he forms a sort of half-way approach to early man, taken up in the third grade.

The third and fourth grades are planned to contrast primitive man under primitive conditions with civilized man under primitive conditions. In the one the progress is slow and painful, as man learns to lead the group life. In the other the progress is rapid and comparatively pleasurable. The difference spells civilization—community cooperation—the group life. Grade 5 is a continuation of grade 4.

Grade 6 has three purposes: To fill in the break between grades 3 and 4; to orient the young citizen; to form a background for the work of grade 7.

American history is covered three times, but in different fashion each time: Grades 4 and 5, in story form; grade 7, consecutive, but dealing only with the simpler aspects of our country's history; grade 11, topical-chronological, dealing with the maturer phases and problems of American history.

European history is covered twice: In the sixth grade, in story form; in the 10th grade, as a world survey, with steadily increasing emphasis as recent times are approached.

Throughout all the history study of the junior and senior high school constant use is made, first, of the "approach" to each topic, which ties the topic to the live interest of the pupil; second, of comparisons and interrelationships; third, of committee work in the solving of the various problems presented, care being taken to touch only the high spots.

Truncated history—whether the part reserved for study is the so-called "ancient" or the so-called "modern" history—is not a part of the Pennsylvania program of citizenship training. To be effective, the story of human progress—of how man has learned to cooperate with his fellowman—must begin where the story itself begins and end where it ends. With the problem method and committee reports, this becomes feasible; with the formal recitation and the inclusion of petty detail it is next to impossible.

The "civic virtues" of the elementary civics are so planned as to aid in the formation of right social habits during the impressionable early years. The value of habit as a constraining influence with young citizens and with older ones is carefully kept in mind.

The "community-cooperation" of the intermediate grades is intended to show the service rendered by the people around us; how dependent we are on that service; how interdependent we all are, due to our highly specialized vocational life; how this interdependence is made possible only through cooperation; and finally, how cooperative good citizenship necessitates the exemplification by each citizen of the civic virtues already stressed.

"Community civics" discloses to the young adolescent how the elements of civic welfare are secured through community organization; that is, through organized community cooperation. Having reached the organization (the "gang spirit") stage the pupils are ready to become interested not only in activity, but also in the organization back of the activity. However, care is taken to follow the order of interest of the pupil; namely, from activity to organization and then to legal powers. The end of civic instruction being civic activity, the young citizens of the class are helped to discover how they themselves may cooperate in some organized fashion, for example: Health Crusaders; Safety Patrol; Junior Civic League; Junior Red Cross.

The vocational-economic civics of the ninth year has a twofold aim. The vocational civics discusses the nature of occupations, the qualities and training necessary for advancement, the social service to be rendered, and the business ethics involved. The economic civics is a sort of elementary economics, or business civics, with a more general discussion of how wealth is produced, consumed, and exchanged.

Where time is to be found for European history in the second half of the ninth year, either of these semester courses may be taken without the other.

The course in problems of democracy is based on the proposition that young people face problems not sciences, but that they must go to the social sciences for explanations and possible solutions of these problems. It is also based on the notion that there are certain fundamental concepts (described in the syllabus) with which every intelligent adult citizen must be acquainted, and that these concepts should be taught not directly as topics in themselves, but indirectly along with the problems under discussion.

This culminating study in the social science program is primarily intended to train our upper high-school students in how to investigate, to reason, to compare, to judge. It is expected to train in power and initiative. As a by-product, it lays a foundation in the social sciences both for those who go to college and for those whose academic education ends with the high school. The stand is taken that the public secondary school—the "people's college"—has no right, from a social standpoint, to send young men and women out into the world lacking specific training in the problems of American democracy—the problems whose solution will soon be in their hands. Longer to side-step this all-important function of the high school is to "reap the whirlwind."

REPORT TO THE COLLEGE ENTRANCE EXAMINATION BOARD.

In November, 1922, the College Entrance Examination Board received a report from a commission which the board had directed to prepare a revision of the definition of history and civics requirements. This report recommends that but four examination papers be set by the board in the social studies, as follows: History A—Ancient history; History B—European history; History C—English history; History D—American history (with or without civil government).

Instead of having three separate papers in American history and civil government, the commission recommends a single paper provided with a group of questions from which the candidates who are offering civil government would choose in place of from one of the history groups on the paper.

The commission was unanimous in its opinion that the separate examination paper in civil government, giving one-half a point of credit for college entrance, should be omitted. It was not alone the fact that a very few students present

this subject for entrance that led the commission to its decision, but also the conviction that it was not wise to encourage the study of civics in the high schools apart from the history instruction. Setting a separate paper in civics, the commission felt, would tend to the slighting of American history, and perhaps to the encouragement of an undue emphasis on the formal side of government. "Civics" has come to mean two very different things of late: On the one hand, it is considered as the study of the structure and operation of the government, local, State, or National; and, on the other hand, it is made an exercise in the duties and responsibilities of citizenship. It is the former of these definitions which the examination papers in civics recognize, whereas our textbooks (generally for grades far lower than the fourth year of high school) are increasingly emphasizing the "community" aspect of civics. The time may come when qualified instructors and adequate textbooks shall furnish high-school students with a course in civics worthy to be made the subject of examination for entrance into college. But until there is more progress made toward that end than at present it seems unwise to set a separate paper in civics.

While this report of the commission on college entrance requirements has been severely attacked by those who call it reactionary, this much at least can be said in its defense. Under the still very strong influence of the reports of the committee of seven and the committee of five of the American Historical Association, to which the report harks back (more closely to the former which was made in 1898), a great majority of the schools organized mainly to prepare for college give the courses for which the commission proposes examinations; and a large number of public high schools, even in the Middle West and West, still work under this program. It is true that the college board carries some burden of responsibility because of the influence it can wield, but its officers would probably say that its duty is to examine in the work offered rather than to determine what work shall be done.

There are no satisfactory statistics available for the whole country in all of the social studies, but while Mr. H. H. Moore's investigation through two questionnaires, two years apart, shows a rapid increase in the amount of economics, sociology, and the newer type of civics taught, it is pretty clear that the course called American history and civics (but containing very little civics) is still the most popular course. A good second runs ancient history, with mediaeval and modern Europe a poor third, and English history far in the rear.

THE SECOND COMMITTEE OF EIGHT.

It may be useful to present here for comparison with the Pennsylvania program another 12-year course of study. This course is important for two reasons. First, it runs so nearly parallel with the recommendations of the committee on social studies of the National Education Association that joint meetings of the bodies making the two reports found little to differ about; and second, it was

prepared by a committee of the American Historical Association and shows the progress in that body under the influence of changing conditions. The summary of the committee's recommendations, given below, was contributed by its chairman to the June, 1919, number of *The Historical Outlook*. It seems more useful to offer this definite outline than to summarize the report of the committee on social studies, for the reason that, since the report is a body of tentative and alternative suggestions, a brief abstract is almost certain to misrepresent the intentions of its makers. The summary of the recommendations of the second committee of eight follows:

THE ELEMENTARY SCHOOL—GRADES 1-6.

This course begins in the community and ends in the community and draws at every stage upon the pupil's experience in the community. It embraces two units or cycles.

CYCLE I. THE MAKING OF THE COMMUNITY.

Grade 2.—The making of the community. From a simple study of changes now visibly in progress the pupil is led back to the days of Indian occupation. He learns what Indians are like, how they lived, and some of the stories which they told about themselves; how the white men came, how they lived in pioneer days, and some of the great changes since. The story at no point leaves the community.

CYCLE II. THE MAKING OF THE UNITED STATES.

A few facts of primary significance in the development of the United States are selected and so arranged as to form a simple but connected story. At the end provision is made for a study of how we are governed today. This work is designed to begin in the third grade and to continue through the sixth grade, as follows:

Grade 3.—How Europeans found our Continent and what they did with it. Some fundamental problems of discovery, exploration, and settlement are here illustrated.

Grade 4.—How Englishmen became Americans, 1607-1783.

Grade 5.—The United States, 1783-1877.

Grade 6.—The United States since 1877 (half year). How we are governed today (half year).

For schools that may wish to begin history later than the second grade a rearrangement of this cycle is recommended. The special syllabus for these grades, which is to accompany the final report, will develop the methodology of the subject. Detailed provision will also be made for adequate civic and moral instruction in each grade.

CYCLE III. THE JUNIOR HIGH SCHOOL (GRADES 7-9)—AMERICAN HISTORY IN ITS WORLD SETTING.

This will constitute a third unit, or cycle, designed to form a logical and psychological development of the work given in the elementary grades. A few facts of primary significance in the development of human civilization are selected and so arranged as to form a simple but connected story. Our own country is here treated as a part of the world whole, but with special empha-

sis upon our own contributions and problems. This work is designed for the seventh, eighth, and ninth grades, and is divided as follows:

Grade 7.—The world before 1607, and the beginnings of American history, including the building of the Spanish Empire in the New World, the basis of the present group of Latin-American Republics.

Grade 8.—The world, since 1607, viewed in relation to the evolution and expanding world influence of the United States. Treatment is to take account of civic problems, but to emphasize especially the economic and social features of our history up to recent times.

Grade 9.—Community and national activities. This course combines recent economic and social history with commercial geography and civics.

For those pupils of the ninth grade who expect to complete the senior high school, the committee recommends as an alternative to the above, a course in the progress of civilization from earliest times to about 1650.

CYCLE IV. SENIOR HIGH SCHOOL (GRADES 10-12)—THE MODERN WORLD.

This fourth unit or cycle for pupils who are about to function as active citizens on a rather high plane of political and social intelligence, will consist of the following year courses:

Grade 10.—Progress toward world democracy, 1650 to the present. This will be a study mainly of European history, but with some attention also to the rest of the non-American world.

The emphasis will be upon political movements and political reorganizations. But the explanations of these will be sought in economic changes, in inventions, discoveries, and social regroupings, as well as in the leadership of great personages and the influence of critical or constructive ideas.

Grade 11.—The above course will form the background for a study in the same spirit of United States history during the national period, with emphasis on a list of topics to be selected for special treatment, and with critical comparisons with institutions and with tendencies in other countries.

Grade 12.—Social, economic, and political principles and problems.

COMBINATION COURSES.

One of the noteworthy tendencies in the evolution of the social studies is that which leads to breaking down the traditional lines of specialization, so far as the schools are concerned, and the setting up of courses which offer combinations of elements taken from several subjects.

The committee on social studies, in its report of 1916, recommended for the work of grade 7 a combination of history, geography, and civics, as one of the alternative possibilities; and it urged throughout its report the necessity for looking upon the three years of each cycle—junior and senior high school cycles—as one cumulative course of study.

The course in problems of democracy, which this committee recommended as the capstone of its curriculum, carries the subtitle "Economic, Social, Political." The basic principle of it is that the teacher will take up one public problem after another and discuss it in the

light of the best available scientific knowledge, drawing from the fields of history, economics, sociology, political science, and geography. In justification of its proposal that such a combination course be set up, the committee argues as follows (p. 53 of the report):

A justifiable opinion prevails that the principles of economics are of such fundamental importance that they should find a more definite place in high-school instruction than is customary. Courses in economics are accordingly appearing in high-school curriculums with increasing frequency. To a somewhat less degree, and with even less unanimity as to nature of content, the claims of sociology are being pressed. A practical difficulty is presented by the resulting complexity of the course of study. The advocates of none of the social sciences are willing to yield wholly to the others, nor is it justifiable from the standpoint of the pupil's social education to limit his instruction to one field of social science to the exclusion of others. The most serious difficulty, however, is that none of the social sciences, as developed and organized by the specialists, is adapted to the requirements of secondary education, and all attempts to adapt them to such requirements have been obstructed by tradition, as in the case of history.

The practice of combining subjects was not new with this committee, however. The committee of seven recommended that history and civil government be taught together in grade 12; the committee of eight recommended that civics be combined with history in grades 5 to 8, the proportion of civics gradually increasing; and the committee of five recommended that the history courses in grades 9 to 12 give adequate attention to economic, social, and political conditions. It is manifest that a trained teacher can not give adequate attention to economic conditions, for example, without shedding on them the light of such knowledge of sound economic science as he has at his command and thus teaching some economics. It is only fair to say, however, that these committees would have denied that it is wise to try to teach economics in the schools; they would have said that these recommendations bear on the selection of facts to be taught. But they at least spoke for such teaching of economics in the schools as seemed to them at that time to be possible, and the teaching of it with history and government.

Nearly all recommendations made in the past decade to guide the maker of social studies curricula provide for the combination course for grade 12 at least. While the axe of the specialist naturally appears to be ground when the detailed content of the combination course comes up for consideration, the political scientists, sociologists, historians, geographers, and economists have all directly or indirectly, through their committees, accepted the principle of a combination of subjects in grade 12 if not lower down in the schools.

Even in the lower division of the college, the tendency toward combination courses in the social studies has been felt. The bulletin of the American Association of University Professors for October,

1922, offers a list of 14 leading institutions of higher learning such as Amherst, Columbia, Dartmouth, Leland Stanford, Missouri, and Williams, where courses are offered in which the lines of specialization have been broken down. In speaking of a college course not dissimilar in purpose from the problems of democracy referred to above, the report says:

The endeavor to give the student a stimulating and intelligent interest in the main human problems of the present day is of very great importance * * *. And we believe that a course in which this is dominant should be given at the earliest practicable point in the undergraduate curriculum.

Many thoughtful educators are concerned lest the useful movement to break down the too rigid separation of subjects run to the extreme of ignoring the scientific content which the university study of the subjects can contribute to the school curriculum. They claim that the courses in current events illustrate this danger; for, they claim, a useful device which might be properly used to awaken the attention of the pupil is permitted to constitute the body of instruction. Only the future can show whether our educational system is strong enough to introduce a moderate reform without going to radical and superficial extremes. We have no facts yet which show what the results will be.

CIVICS AND THE TEACHING OF GOVERNMENT.

One of the dangers inherent in the present movement toward combination courses is the omission from them of some important element. This danger is one of the reasons why specialists oppose the progress of this movement so persistently. At least since the day of the committee of five, those who would like to see some attention given to the teaching of government have insisted that civics be kept separate from history. They say that they take this position because civics always turned out to be mere constitutional history or less when the two subjects were combined.

In some cases the pendulum has swung from the memorizing of paragraphs in the Federal Constitution to what a distinguished sociologist has called "the forensic exchange of ignorant opinion" about such matters as divorce or the trusts. Teachers who frankly say that they have never studied government and have no wish to teach it are assigned classes in community civics or problems of democracy and are told to train their pupils in the principles of good citizenship. Placed in so impossible a position, what could be more natural than for them to go back to memorizing constitutional details, if their pupils are to be examined in these; or to the "socialized" discussion of newspaper headlines if they are not to be examined by any extramural authority?

Lest this lamentation seem pessimistic beyond the facts, let authority speak for itself. The State department of public instruction recently caused a survey to be made of the schools of one of our largest cities—a city where civics has been given exceptional attention. The report on the survey says: "The weakest single spot in the social studies is the failure to deal with political organization and problems. The organization of the city and State is almost wholly neglected." This is no indictment of the particular teachers involved; it is an indictment of our educational system, for conditions are worse in most other quarters in this regard than in the city which was surveyed.

When the commission of the College Entrance Examination Board, referred to above, undertakes to say that "the study of civil government should include analysis of the Constitution of the United States—the powers, organization, and functions of the Federal Government, the relations between the States and the Federal Government, and the general nature and extent of the powers reserved to the States"—it becomes responsible for the omission of important items from the list it offers. It says that "due attention should be paid to the policy of the United States in foreign affairs, tariff, banking, civil service, trusts, conservation of natural resources, capital and labor, immigration, and other present-day problems."

But for the fact that the report specifies "policy of the United States" one might suppose that "other present-day problems" cover such items of political organization as municipal home rule, the short ballot, the consolidation of State administrative organs, city manager charters, and the like. These problems of government are far simpler and more teachable than such economic concepts as capital, labor, tariffs, and trusts; scholarly opinion on them is united and definite; even political parties differ on them so little that two New York statesmen—one an ex-governor and the other a governor—of different political parties, stumped the State together to awaken interest in them; yet they are omitted from our teaching, as anyone can learn who will examine a beginning college class in government.

HISTORY IN THE SCHOOLS.

The conservative educator is concerned lest effective teaching of history be weakened through the present tendency toward combination courses and emphasis on emotional discussion of current social problems, not to say the philosophy of the newspaper headline. He calls attention to the extremist who would substitute for the study of man's development a random reading in the background of such matters as are mentioned in the daily paper.

Ignoring the extremist who would drive real history out of the schools, attention may properly be directed here to one issue which is dividing practical educators into pretty definite camps. This issue may be expressed as follows: Is it worth while to attempt to cover the outlines of history in a one-year course? Expressed differently: Since it is likely that the average pupil can be required to take only one year of non-American history in the high school, is he likely to derive more benefit from studying the history of one period than from an effort to see man's progress from the beginning? Some historians will say that this latter statement begs the question at once, for they believe that it is impossible for the high-school pupil to be brought in one year to see man's progress from the beginning. In support of this position they recall to memory the discarded and discredited courses previously offered in general history.

The following facts seem to bear on the problem: Grade 12 seems to be destined to the study of political, economic, and social problems or some of these in some combination or arrangement. The junior high school seems to be on its way to adoption, leaving only three years in the senior high school. It is fairly certain that one year in any social-study program will be given mainly to American history. Grade 10 is left to serve as an introduction in the following arrangement: Grade 10—Non-American history; grade 11—American history chiefly; grade 12—Problems of democracy. The junior high-school course in social studies seems likely to grow up around a similar outline—grade 7 presenting a problem similar to that presented by grade 10.

H. G. Wells has given considerable stimulus to the demand that young people be exposed to the optimistic philosophy which may be derived from a study of what the evolutionist claims is man's upward progress from the brute. The new Pennsylvania program recognizes no "truncated history." Its authors would probably say that the two years of history in the senior high school must constitute one cumulative course, and that it must begin with the beginning of what we know about man in the world and end with an account of the present conditions of man. They would not recognize high-school courses, junior or senior, in "modern," "medieval" or "ancient" history.

The sociologists seem pretty well united against truncated history, insisting that the work of grade 10 be comprehensive. The second committee of eight of the American Historical Association accepts most of the foregoing argument for a two-year course in history for either high school; for the junior high school it provides that grades 7 and 8 shall cover the whole story of man, including American history, dividing the work assigned to the two grades at the year

1607; but in the senior high school it proposes that the work of grade 10 begin with 1650.

Most of the statements for and against the possibility or desirability of certain types of history courses are dogmatic. When they do not proceed from mere subjective impressions they are based on the most casual observation of teaching in different schools where conditions are so likely to be different that no scientifically trained person would claim for a moment that proof one way or the other results. What is sorely needed is some controlled tests of what can be done with each type of course in circumstances that are kept constant enough for definite judgment. If this can not be undertaken, it would seem wiser for us to give less rein to our dogmatism. It may be that one kind of history course is as good as another if it is taught by a well-trained and enthusiastic teacher; and it may well be that no history course is worth the pupil's time unless it is so taught.

THE CIVIC VIRTUES.

While the secondary schools are being organized to give currency to the scientific principles on which a desirable social order may be developed, attention is also being given to a still more fundamental condition precedent to real democratic life.

The twelve-year program for the Pennsylvania schools provides that the children in each of the six elementary grades shall be trained in such civic virtues as obedience, truthfulness, fair play, reverence, self-control, thrift, and an appreciation of the spirit of cooperation. Other cities, as widely distributed as Los Angeles, Cincinnati, and New York, have programs in which attention is given to the ethical and moral foundation on which all efforts at democratic life must stand. The most convenient statement of the present status of this effort is probably to be found in Bulletin 18, 1920, of the United States Bureau of Education, by Hannah M. Harris, of the Hyannis, Mass., State Normal School. The title of the bulletin is "Lessons in Civics for the Six Elementary Grades of City Schools."

The leaders in the movement for training in the civic virtues in the first six grades of school life organize their teaching around the idea of cooperation and the Golden Rule. With this basic spirit of fair dealing goes the effort to create a respect not only for economic effectiveness and thrift in handling one's own property, but for handling that of the community as well. Through such teaching, the way is paved for progress toward organization. It is futile to organize unless the elements united are desirable elements. If the individuals lack the ideals which make for a better life, anarchy or despotism may be better than democracy.

As the pupils develop, other efforts are being made to mold their character and to strengthen moral principles by grounding them in reason and practice.

The community, vocational, or economic civics of the junior high-school grades has in some cases left a false impression on the minds of scholarly observers. It may be that the terminology is too pretentious for what is actually done by some of the best teachers. In this period of rapidly developing vigor and independence, the pupils are encouraged to reach out into the work of the world around them for practical things. Even as early as grades 5 and 6, they are introduced to the public officials who aid in the cooperative enterprise called the community—the postman, the ashman, the street cleaner, the traffic and other service policemen. They are also made conscious of the fact that the grocer, the milkman, and the iceman are friendly fellow workers to whom certain parts of our common service have fallen. The better type of teacher makes every effort to create a constructive vision of useful cooperation, leaving for the future to reveal that scattered members of the social order betray it now and then. The mind of the child will not be made receptive to high ideals unless it is shown that the majority of the older people are living by these ideals. With still further maturity, the organized services of the city and the State, such as the water supply, are used as illustrations.

As early as seems best to the administration of the school, another method of training in the virtues of democracy and in a comprehension of its difficulties is introduced. On the principle that one may learn by doing, what is mistakenly called self-government, in the school is introduced. The more thoughtful are using the expression pupil participation in school management. The pupils in the high-school grades are stimulated to look upon the interests of the school as their interests.

They are molded into citizens of a small commonwealth, but the fact is not lost sight of that they are too young to assume control. This wholesome idea of limiting authority because of the slight experience of the pupils exerts widespreading and beneficent influences on the minds of the growing children. Pupil participation in school administration is often misunderstood by the casual observer, who supposes that it relieves the teacher or principal of some work or responsibility. As a matter of fact, it greatly increases the problems of control just as democracy tests the character of rulers more than despotism does.

Much of this training in civic virtues is closely related to the social studies; but for much more of it the whole administration of

the school must take the responsibility. One tendency which may endanger effective teaching in the field now under consideration is to saddle the whole moral responsibility of the school upon the shoulders of one department just as the mistake has been made of saddling the whole responsibility for correct use of English upon the shoulders of the teachers of English. Civic virtues and correct English must be the concern of every teacher in the school if these basic desiderata are to be obtained.

THE OUTLOOK FOR THE SOCIAL STUDIES.

It may be that the report of a committee of the National Association of Secondary School Principals, published in 1920, presented the present situation a little too darkly when it said:

At present, social topics have no proper claim to time. They are pushed aside and we are told that they will be taken care of by other subjects. What we are trying to bring about is a recognition of social studies as the major thread of studies, others finding relation to them as possible. In order to make immediate action possible we recommend that social studies other than history be given the time of one-half unit a year in each of the years from the seventh grade to the twelfth. As most educational organizers would make equal provision for history, this would mean a unit of social studies for each year of the high schools—junior and senior.

In similar vein, a commission, acting under the authority of the Association of Collegiate Schools of Business, has published a report in which is found the following hope:

The question should not be "how to put the social studies into our curriculum," but "how to organize our curriculum around social objectives." The commission believes that the social studies should be the backbone of secondary education, with which all other studies and school activities should be closely articulated according to their contribution to the social objectives of education.

One reason why the social studies have not heretofore been more effectively championed is the fact that the champions have been so divided among themselves. This handicap has been somewhat removed by the organization in 1921 of the National Council for the Social Studies, which is federal in its nature, uniting, first, the historians, political scientists, economists, sociologists, and geographers; second, the school administrators and students of methods in the social studies; and, third, the teachers. As yet the main purpose being served by this organization is to give body to the idea of unity in this field. The journal of the organization is *The Historical Outlook*, formerly *The History Teachers Magazine*, with a subscription list of over 5,000 and a dozen years of successful service behind it. The National Council is gradually drawing together

the elements which contribute to effective teaching of the social studies, giving currency through The Historical Outlook and other avenues to constructive information bearing on courses of study and methods of teaching, and stimulating the organization of local groups and State associations where cooperative attack can be made on the common problems. All of this is done with the main purpose in view of coordinating useful and forward-looking efforts wherever they are to be found.

CHAPTER XVII.

ART EDUCATION: THE PRESENT SITUATION.

By ROYAL BAILEY FARNUM.

Principal of the Massachusetts Normal Art School and State Director of Art Education.

CONTENTS.—The background (to 1920)—The situation in 1920—Basis for this report—Analysis of question naire—The New York State plan—The Massachusetts aims—The Pennsylvania program—Detroit and Los Angeles objectives—High-school art—One-year course on art appreciation—Competitions and exhibitions—Pageants and the project method—Shortage of teachers—Conclusions.

THE BACKGROUND (TO 1920).

Higher conceptions and forms of civilization are necessarily of slow growth. The bare necessities of human existence, food, shelter, and clothing, are first in the requirements of the race. Once supplied, with provision for continued renewal as each condition of life makes its demands, man quickly turns to those other activities or pursuits which cater to his intellectual, spiritual, and esthetic interests. So we find the prehistoric drawings, carvings, and objects of modeling and sculpture, and later the songs, dances, and modes of worship, quite as essential to the growth of nations as the primal needs of food, clothing, and shelter.

The expression of these intellectual, spiritual, and esthetic emotions may be greatly influenced by the individual or group activities required to produce the food, clothing, and shelter, and as the people may be agricultural, seafaring, or manufacturing, so are their various expressions modified. Thus trade, commerce, mining, war, etc., affect the intellectual thought of a race and its esthetic reactions.

Our own country has been experiencing this interesting history of the world's progress. Our forefathers were concerned at first primarily with what they should eat, where they should sleep, and how they should be clothed. In a remarkably short time, when compared with the world's history, we have arrived at that advanced stage where these other interests now demand their proper place.

Unquestionably the World War opened our eyes and awakened our minds to these new demands. While we found much in ourselves to condemn, we discovered that as a Nation we are the moral leaders of the world and the wealthiest people on earth. As a moral Nation there is the stimulus for great spiritual growth; as a people surpassingly rich and thus able to provide those first needs, great intellectual and esthetic reactions must develop.

Moreover, the war accentuated the fact that our arts of peace, in the pursuit of the necessities of life, cover practically all the human activities of the world, evidenced by the fact that we were able to produce all that we needed during the war. So, because we, as a Nation, prior to 1917 had not consciously arrived at that period for esthetic expansion which follows the satisfaction of the early needs and because of our manifold activities, no real American art had appeared.

Finally, the war demonstrated a most practical value for art which had not been previously recognized. It was found that group singing, both in camp and at home, had a most stimulating effect; camouflage and the scientific application of color came to hold a most important place in war activities; posters filled the coffers of the war treasury; and drawing and design generally received a universal recognition and respect withheld up to this period.

Now, art education had held a place in general education for some time, but lately with diminishing effect. It was failing to prove its value, its policies were unstable, and it was being superseded in the minds of educators by the newer special phases of education, such as agriculture, shop work, commercial work, and home economics. An unawakened public, a near-sighted industrial and business world, and classically and theoretically trained educators failed to maintain the support which art education needed, failing rather to see the connection and bearing art has in their various fields and consequently refusing their active approval.

In many directions art had made strides, and art education likewise, but up to the year 1920 no one will contend that we were either a Nation of artistic people or of patrons of art.

As was stated in the opening sentence, higher conceptions and forms of civilization are necessarily of slow growth. So it has been with the awakening of the esthetic impulses of the American people. The struggle for life itself in a virgin land, the experiment of a democracy, and the present mixture of thousands of new Americans tended to retard such progress until the shock of a world conflagration stirred the slumbering interests. A striking example of this new interest is furnished by the 1919 industrial art survey, conducted by the National Society for Vocational Education and supported by the General Education Board.¹

With the exception of those brilliant glints in the art field, where far-sighted men and women have maintained a lead, the situation was almost static, but with everything staged for a rapidly developing and dynamic future.

¹ See *Art in Industry*, by Charles R. Richards, Macmillan Co.

THE SITUATION IN 1920.

The year 1920 marked a period of greatly increased recognition of the great value of art, especially in the industrial world. The nervous tension of the war had let down, and reconstruction in every direction was well under way. The lessons of the war were being learned and an attempt was being made to put them into practice. More advertising, more color, more daring design, more war memorials, and many more activities were demanding art.

In turn the art teacher and supervisor, always alert to the outside demand, were reconstructing their ideas and planning for richer courses. Closer connection with world production, trade, and commerce, and the art necessary for their development were being studied. The so-called new "project method" in education, an old friend of the art teacher, was loudly announcing itself and by its very nature was demanding closer contact with art and handwork. Dramatics and pageantry were asserting themselves with their cry for color and costume. Thus the situation was bright and the opportunity never better for carrying forward this phase of esthetics in education.

BASIS FOR THIS REPORT.

The study for this report is based upon the writer's own contacts in the educational and industrial world and upon returns to a questionnaire which was sent to leading art educators, directors, supervisors, and teachers throughout the country.

A generous response was received from a goodly number of teachers, who showed keen interest in desiring to know the results of the questions and the findings of the report.

ANALYSIS OF QUESTIONNAIRE.

The accompanying table gives a comprehensive survey of the general trend in art education from 1920 to 1922. While the number of returns might have been multiplied many times, these results indicate fairly accurately the situation. It will be noted that the North, the East, the South, the West, and the Middle West are represented, and that a few of the well-known professional schools are included.

ANALYSIS TABLE.

(Question No. 5. "State whether you think the general trend in art education with in the last two years has been along any of the following lines:")

Place and official's name	(a) Art applied to in- dustry.	(b) Art applied to home cos- tume.	(c) Accu- rate obs- er- va- tion.	(d) Taste and cul- ture.	Further comments.
State of Pennsylvania. C. Valentine Kirby, director.	x	x	x	x	I believe that the best thought to-day interprets appreciation as a 100 per cent need and equipment that should be possessed by 100,000,000 of people in the United States. Certain localities have stressed certain emphases. a, b, and d have certainly created more discussion than c, and I think more consideration in actual practice; but we need c. c Yes; but to a much less degree, unfortunately; d yes; to a greater degree than c, but not so much as in the cases of a and b. I think the general trend has been with emphasis on art applied to costume and home from the standpoint of taste and general culture. The taste and general culture in this country are growing in the smallest of communities, as I have observed in the East and all of the West Coast States. Graphic expression is an important part of every school subject in every school year. We find also that in the applications that are made for the various courses attention is directed toward these matters by approximately the same number of applicants. The shifting of emphasis during the last two years is undoubtedly in the direction of applied art. I think the general trend in art education in the rest of the country has stressed a and b in a short-cut method which has neglected more or less the fundamental principles and habits of mind which are necessary to genuine artistic growth. In my judgment, the emphasis in art education has been on art applied to drawing and design from the standpoint of accurate observation and truthful expression, plus an attempt to meet the demand of applied art in industry. We sincerely hope that the American teachers are going to realize that art instruction must be of a practical as well as cultural value in order to be acceptable to the general public. The crying need is general culture. A parent must hesitate before sending his children to the be-frizzled, bob-haired, be-jeweled, over and under dressed type of young women entering the teaching profession. I have given especial attention to commercial art during the last two years. Intelligent appreciation must be based on accurate observation and knowledge of fundamentals in color and design. From all parts of the Central West there has come for several years expression that we ought to return to real drawing.
State of New York. Leon L. Winslow, director.	x	x	x	x	
State of Massachusetts. Royal B. Farnum, director.	x	x	x	x	
Chicago University, School of Education. Walter Sargent, professor.	x	x	x	x	
Teachers' College, Columbia University. Arthur W. Dow, professor.	x	x	x	x	
State Teachers' College, Santa Barbara, Calif. Hamilton A. Wolf, head art department.	x	x	x	x	
Massachusetts Normal Art School. Amy Whitner, head teacher, training department.	x	x	x	x	
School of Fine and Applied Art, Pratt Institute. Walter S. Perry, director.	x	x	x	x	
Cleveland School of Art. Henry T. Bailey, director.	x	x	x	x	
Boston Normal School. Helen B. Cleaves, head art department.	x	x	x	x	
New York School of Fine and Applied Art. Frank A. Parsons, director.	x	x	x	x	
The Maryland Institute. Alon Bement, director.	x	x	x	x	
Salem Normal School, Massachusetts. Frederick M. Whitney, head art department.	x	x	x	x	
Arlington, Mass. Olive Hanna, high school.	x	x	x	x	
Boston, Mass. Theodore M. Dillaway, director.	x	x	x	x	
Cincinnati, Ohio. William H. Vogel, director.	x	x	x	x	

Cleveland, Ohio.....	×	×	×	×	×
Helena M. Fiedner, supervisor. Dallas, Tex.....	×	×	×	×	×
Lida Hooe, supervisor. Denver, Colo.....	×	×	×	×	×
Marie L. Woodson, director. Detroit, Mich.....	×	×	×	×	×
Alice V. Guyst, supervisor. Indianapolis, Ind.....	×	×	×	×	×
Florence H. Fish, director. Los Angeles, Calif.....	×	×	×	×	×
May Gearhart, supervisor. Minneapolis, Minn.....	×	×	×	×	×
Bess Eleanor Foster, supervisor. Newton, Mass.....	×	×	×	×	×
Fred H. Daniels, director. New Orleans, La.....	×	×	×	×	×
Ida Barrow, supervisor. New York City, elementary school. Frank H. Collins, director. Springfield, Mass.....	×	×	×	×	×
C. Edward Newall, supervisor. St. Louis, Mo.....	×	×	×	×	×
R. A. Kissack, supervisor. Wellesley, Mass.....	×	×	×	×	×
Mary L. Patrick, supervisor. Yonkers, N. Y.....	×	×	×	×	×
J. W. Andrews, director.	×	×	×	×	×
Total.....	29	21	9	14	

1 Deceased.

Does not art always receive emphasis from the standpoint of taste and general culture in colleges and museums?

The last year has seen some reaction from industrial art.

a and b especially, c least of all, d less than a and b, but more than c.

Now more attention is being given to c and d in connection with and by means of applied art work.

a and b are receiving more consideration than d, but the value of d in connection with a and b is undeniable.

In a well-rounded course c and d, under your question 5, must not be neglected.

Drawing for service—our trend.

Latterly, I believe, there is more emphasis being placed upon general culture and the training of taste.

Clubs are constantly calling for talks on this phase of art education; d, an every-day application of art principles.

If any one phase has received special emphasis it has been art applied to the costume and the home.

Ought to be more on c to balance.

Personally I have preached taste and general culture, but it is not as tangible and hence harder to measure results.

It is evident from the foregoing table that very generally emphasis has been placed upon the industrial phase of art, probably with commercial or advertising art receiving most of the attention. The rapid development of the poster and with it all forms of printed design, all of which received an unprecedented impetus during the war, has left its impress on our school art.

This industrial application is borne out in the character of work outlined by the graded art textbooks of the country, usually planned and edited by experienced art educators.

But further returns from the questionnaires, with answers to question 4, throw more light on the situation. In New York State, for example, the outstanding features given special emphasis during the last two years are, among other things, "Art education realized through the subject of industrial arts in grades one to six combining drawing and manual training motivated by a study of the industries." In Maryland, an object "always in mind—in establishing our courses in the high schools throughout the State"—is "that all instruction should be in close harmony with the industrial interest of the various communities reached." From Santa Barbara, Calif., comes, "The manufacturers themselves are seeking the schools and helping most generously." Frank Alvah Parsons sums it up thus: "The growth in the point of view of how to apply it (art) in the home, in clothes, and in advertising surroundings has been enormous. This, in my judgment, is the unavoidable trend of things in the next two years."

And yet, nearly all the art leaders, in their personal beliefs and local teaching, stress the cultural or appreciation phase according to their questionnaire returns. Mr. Parsons adds, "This with a surely awakened esthetic sense in America makes this our only logical course." The following are examples of this thought:

State Director Kirby, of Pennsylvania.—"We have placed the emphasis during the past two years upon an extension of the art work in every section of the State; hope soon that there will be no district in the State, no matter how small, where the children do not have the opportunity to express themselves along art lines and within a reasonably attractive schoolroom.

"I might say that we are still missionaries desiring to extend opportunities State-wide, rather than advertise a few high spots of unusual excellence. While we place cultural values above all others, at the same time we take advantage of every opportunity to connect up with the conservation of health, forestry, and property generally, and participate in fire prevention and all other worthy campaigns, in order to impress the unbelievers with certain values in the art educational work that the man on the street can understand."

Professor Dow, of Teachers College, Columbia University, New York City.—"I should say that the outstanding feature of our work has been toward appreciation of art on the part of the general public, and especially to engage the interest of the business world."

Alon Bemont, of Maryland Institute, Baltimore, Md.—"We have held two objects always in mind in establishing our courses in the high schools throughout the State.

First, that each student be given a sound basis of appreciation through the study of abstract forms of art, simultaneously with his training in representation."

Hamilton Wolf, of Santa Barbara, Calif.—"The taste and general culture in this country is growing in the smallest of communities, as I have observed in the East and all of the West Coast States. I believe the art renaissance will be in this country of ours."

Frederick Whitney, of Salem, Mass.—"Cutting fancy baskets and ornate flower pots and vases and painting unheard of flowers and fruits and birds of the most grotesque forms and colors hardly seems to me art of good design. What has become of efficiency and discriminating taste? It seems, however, that the pendulum has reached its limit and is swinging back toward a more sane, practical, and beautiful type of art instruction."

"More recently as I have stated, the jazz atmosphere entered our work, and the art magazines presented to the teachers of the community the most shocking illustrations of 'the correct things to teach our children.'"

"The aim of our school has been the emphasis on art from the standpoint of taste and general culture, which naturally includes drawing and design from the standpoint of accurate observation and truthful expression and utility."

"The statement is frequently made by educators that the young people of to-day are as fine, refined, womanly etc., as they ever were in the past; but if externals manifest what the mind dictates there is sad need of the refining and cultivating influence of art study from the standpoint of general and high ideals."

Theodore M. Dillaway, of Boston, Mass.—"We have been emphasizing the grounding in fundamentals the first eight years of education and art appreciation in the ninth year. Work of the general high schools aim also for appreciation rather than technique. In the special high schools the art work is related to the activities of each school."

Alfred E. Burke, of Cambridge, Mass.—"The ultimate aim of all our work is to develop in the minds of these young people an appreciation of beauty anywhere and everywhere—whether it be in nature, historic art, the printed book, costume, or a manufactured article; they all exert a potent influence on the happiness of the individual. True art education would assist society in interpreting the world attaining happiness."

Marie L. Woodson, of Denver, Colo.—"The structure of art, rather than a haphazard stumbling upon good effects. This includes color and arrangement as applied to many of the affairs of life. I try especially to teach that art principles can be learned and applied by all normal human beings, an idea that seems difficult to 'put over'."

Alice V. Guysi, of Detroit, Mich.—"Outstanding features in Detroit: Art appreciation, project method applied to art instruction, close cooperation with Detroit Institute of Arts."

Florence H. Fitch, of Indianapolis, Ind.—"We aim to emphasize proportion and expression in the primary grades; correct form and principles of design in intermediate grades; and artistic expression based on the knowledge of laws in the upper grades. Through all such work we hope to develop an appreciation which will have an intelligent basis."

May Gearhart, of Los Angeles, Calif.—"Emphasis on training for citizenship which necessitates courses in art appreciation for all students."

"A clear understanding on the part of teachers and advanced students in regard to the ultimate outcome desired in connection with every art problem offered"

"A working knowledge of color theory."

"Continued emphasis on self-expression and development of initiative."

Bess Foster, of Minneapolis, Minn.—"I am heartily in sympathy with any movement that will tend more and more to make our people demand that what they wear,

what they place in their homes, and whatever comes into their daily lives shall be beautiful as well as useful. Back of it all we must teach certain principles of color and design as we teach the multiplication tables."

Ida Barrow, of New Orleans, La.—"Latterly, I believe there is more emphasis being placed upon general culture and the training of taste."

C. Edward Newall, of Springfield, Mass.—"Emphasis on art from the standpoint of taste and general culture is much in demand for a better understanding of principles and applications by people in general."

J. Winthrop Andrews, of Yonkers, N. Y.—"To get good art teaching versus dictation of subject matter or lack of direction. To get standards possible and of sufficient quality and quantity for each grade."

"To get pupils and teachers to see that we are studying art for 'life's sake' and not for 'fun,' as an 'extra,' or to just 'get it done.'"

"To more and more relate and apply the problems to the school, home, and city needs of the child. The adoption of the 'project' method in all other school subjects has helped in this very much."

"To make thinkers in art expression and appreciation."

"I feel sure that all supervisors of art have taste and culture constantly in their minds even though they may express it in any of the above subjects."

It would appear from the foregoing that while there has been a strong tendency everywhere to relate art and industry in education, at the same time the need for discriminating taste and appreciation is strongly felt. Some returns go a step further and state that with the tendency toward the world of industry and the consequent need for general appreciation, it is equally imperative that keen observation and truthful expression be stressed if the first results are to be obtained.

In summing up the results of the questionnaire it would seem (a) that national tendencies have a direct influence on art education, for there has been apparent and invigorated industry with its widespread advertising; (b) that art applications require appreciation and taste in designers and consumers, therefore they are necessary objectives in art education; and (c) that to train in taste and appreciation, and to make intelligent and successful correlations with industry, costume, or the home there is need for sound drawing and design expression.

The past two years have unquestionably witnessed a stabilizing of policy and aim. The seasons, holidays, and world of form no longer become the basis for the art-course study. There seems to be a generally recognized attempt to relate all courses to the common manifestations and applications of art expression wherever that may be found and with it the exposure, at least, of children to real conditions of modern civilization and community life.

THE NEW YORK STATE PLAN.

New York State has perhaps gone to one extreme in the past two years, at least in so far as art in the elementary grades is concerned. The industrial point of view is dominant even to the exclusion of the

older claim that drawing and art might exist in part for their own sakes and not always for their applications. While other objectives than industrial are recognized, the present effort is to not only industrialize art but to establish a new school study combining with art all other handwork subjects.

The report of the committee on art education, following an educational congress in New York State, as printed in the official publication, 1920, clearly defines this point of view.

There is an extensive body of industrial information which is already being organized, evaluated, and crystallized into the new school study. Our geographies, reading books, and drawing books are taking cognizance of this point of view.

Instruction in the industries will create in children a sufficient interest in, and knowledge of, things industrial to enlarge their ability to appreciate and enjoy the works of artist, mechanic, and manufacturer. This will be brought about (1) by investigating the conditions under which products are made; (2) by making drawings to illustrate forms, facts, and operations, thus clarifying concepts; (3) by manipulating the materials from which articles are made, thus creating a new product; and (4) by making decorative designs to enhance the beauty of objects. There is no reason why such materials as clay, Portland cement, wood, textile fibers, glass, and metals should not each perform a prominent part in school courses.

The course.—To develop a course of study it will be necessary first to select an industrial subject matter; second, to provide practice in color, representation, and design based upon the subject matter; and third, to provide construction or the manipulation of materials based upon the subject matter. The course should be made out grade by grade, month by month.

Guiding principles.—We advise caution in confining art education within too limited bounds. There must be considerable art expression in paths other than those industrial ones which appear just now to be most important. We must not forget picture study; the artistic arrangement of written work; the care of school property and of the school premises in particular; the conduct of systematized recreation; entertainments and other social functions involving oftentimes music and dancing. Literature, too, comes in for her share in art expression. Try as we may to provide a subject in the elementary school course which will entirely take care of art instruction, we shall not succeed. Art will not be so confined. We believe that upon the acceptance of the nine principles listed below will depend in a large measure the success of art teaching in the first six grades.

1. There must be established a new school study combining the former subjects of drawing, manual training, cooking, sewing, and construction work still found on many elementary school programs. (Drawing, cooking, sewing, and shopwork are appropriate subjects for grades above the sixth, but the combined subject will make for efficiency in the elementary school.)

2. The study will be the same for all children, regardless of race, sex, social standing, or future occupation.

3. Its aim will be the development of social intelligence and appreciation through understanding the things of the environment, which have resulted from man's transformation of the raw materials about him into finished products to meet the need for food, clothing, shelter, records, utensils, tools, machines, light, heat, and power.

4. The topics around which the course is to be organized are: How the race feeds itself; how the race clothes itself; how the race houses itself; how the race puts itself on record; how the race provides utensils; how the race provides tools and machines, and how the race produces light, heat, and power.

5. The primary object of the course will not be the cultivation of technical skill, although some degree of efficiency will result from a proper graduation of the work and from careful teaching.

6. The handwork will be for illustrative purposes, giving insight through participation.

7. Subject matter will include the story of the growth of the race in the use of the raw materials of industry, from primitive to modern industrial methods; the simpler principles involved in tool processes; and the influence of the industries on the life of the people, with constant connection with related literature, history, geography, arithmetic, and nature study.

8. If the school program is properly adjusted such a course will greatly vitalize the other subjects of the curriculum, in many cases saving much time through correlation.

9. The course will be cultural, having an intimate relation with the life experience of the race as shown in its art expression in pottery, textiles, basketry, metal and woodworking, and as reflected in its painting and sculpture.

An objection to the New York plan from the point of view of the supervisor lies in the fact that the scheme is so broad and all inclusive that either he must become a director of all practical or manual arts, with his art interest sharing a less pleasing interest in shop work, cooking, sewing, etc., or the whole problem becomes one for the associate superintendent. Great difficulty would be experienced by the supervisor in undirected States in getting the superintendents to revise the complete program on his sole advice, especially if it were given the title of art. However, in so far as drawing, design, and construction are concerned, the New York plan offers a wealth of new and rich material, pulsating with the life of our age. As a basic plan for general education, including art, it offers exceptional possibilities. Further objectives in this plan follow:

OBJECTIVES OF ART AND INDUSTRIAL ARTS EDUCATION (1922-1923).

By LEON L. WINSLOW, ALBANY, N. Y.

Health, worthy home membership, citizenship, worthy use of leisure, and ethical character are objectives common to art and industrial arts as to all other types of general education. Some of the important objectives, more or less peculiar to art and industrial arts education, are outlined below.

I. Objectives in grades 1 to 6:

1. The development of—

(a) *Appreciation of art and of industry.*

(b) *Industrial intelligence*, through understanding of the things of the environment which have resulted from man's transformation of the raw materials about him into finished products to meet the need for food, clothing, shelter, records, utensils, tools, and machines, light, heat, and power.

(c) *Taste*, through the making of choices of materials and products of art and industry with reference to established ideals.

2. *Vitalization and motivation of the curriculum*, through correlation and by employing the project method of instruction.

II. Objectives in grades 7 to 9:

1. The development of—

- (a) *Appreciation* of art and of industry.
- (b) *Industrial intelligence* (as indicated in I, 1b).
- (c) *Taste* (as indicated in I, 1c).
- (d) *Skill*, through training in drawing and construction.

2. *Vocational guidance*, through the investigation and study of industrial and art occupations.3. *Educational guidance*, through investigating, training, and admission requirements; courses of instruction in the vocational schools and classes, and in the teacher-training institutions.4. *Social efficiency* through the project method of instruction.

The capacity to work harmoniously with others.

III. Objectives in grades 9 to 12:

Elective courses (general).

The development of—

- (a) *Appreciation* (as indicated in I, 1a).
- (b) *Taste* (as indicated in I, 1c).
- (c) *Skill* (as indicated in II, 1d).

Special courses (vocational).

The development of—

- (a) *Skill* through training in the doing of practical jobs with reference to commercial standards.
- (b) *Appreciation* (as indicated in I, 1a)

NOTE: For further study of the New York plan see *Art and Industrial Arts*, a handbook for elementary teachers, prepared by Leon L. Winslow. Bulletin No. 740, August 15, 1921, Albany, N. Y., State Department of Education.

THE MASSACHUSETTS AIMS.

In contrast to the New York plan, Massachusetts defines its aims as follows:

In art education there are two chief objectives which should be understood by the teacher. The first is appreciation. By this is meant conscious interest, awakened emotion, and sensitiveness to esthetic experience which may result from the study of line, form, color, and arrangement.

The second objective is beauty in expression. By this is meant the intelligent application of those principles deduced from a study of the first objective.

To appreciate one must understand how and why beauty exists. Expression consists in using that knowledge to the best advantage in daily living, in school and out, both day and night.

If the first objective is attained certain considerations are essential.

There must be a very definite study of the appearances of form, not so much from the pictorial point of view as from the point of view of purpose, proportion, attitude or construction, and of relationship to form within itself or in juxtaposition to other forms. Facts of foreshortening and convergence may be involved.

So may be developed conscious interest and sensitiveness to form. Through a multitude of concrete experiences the child should be led to observe, and through simple drawing analyze his observations.

There should be further close study of space division and space relations in line, value and color, to be noted everywhere in one's environment. We usually call this design. It involves the principles of repetition, progression, and balance.

We find illustrations all about us and beauty exists only as the principles are consciously and thoroughly carried out. And because we do find examples innumerable and universal we must recognize the clear fact of their importance.

Finally, under this first objective, appreciation, there should be developed a "mind enriched with the imagery of the great art of the world," pictures, sculpture, and architecture. Recognition of a few examples of each, analyzed in exactly the same way, will complete the first part of the program.

To attain the second objective, immediate and constant application of all that is learned under the first aim is required.

In the art program handwork problems, projects, drawing and design are the obvious outlets for expression. It is immaterial what they are so long as they satisfy the principles studied. If this is done they will not be too impractical nor difficult; they will be related to the grade and sex; they will involve mediums and materials adapted to the child and within the means of the situation. What they are, then, becomes again an application of these same principles.

In addition to this, art education in Massachusetts should sift out the talented for further education in the Massachusetts Normal Art School for the purpose of training art teachers and supervisors for the State and to prepare the State's designers, artists, and craftsmen, so essential to the life of her industries.

Here the aims are less involved than in New York State and are based solely on the question of art in education.

THE PENNSYLVANIA PROGRAM.

Pennsylvania likewise presents a plan which is confined to the question of art education alone. The following is an extract from the annual report of the State director, Mr. Kirby, for 1922:

The State program for art education has attracted widespread attention because of its purposeful aims. It has been said that art has been brought from the clouds to earth, in the spirit of service, with the following aims:

First. To bring into the lives of all the boys and girls in the Commonwealth everywhere, a knowledge of beauty, joy of expressing it, the development of skills, and to discover special aptitudes and talents.

Second. To direct those with special inclinations and gifts into various fields where designers, decorators, and professional artists generally are required.

Third. To train specialists in art education to meet the great demands in our elementary, secondary, and normal schools for teachers and supervisors of art.

Fourth. To cooperate with every educational and other agency in the State in furthering by means of pupils' drawings and industrial arts the general school studies, and by poster making advertise health education, the conservation of forests, fire and accident prevention, etc.

Fifth. To provide more attractive school buildings and grounds, and for a recognition and regard for the finer things in the home, the school, the shop, and in life generally.

DETROIT AND LOS ANGELES OBJECTIVES.

The following extracts from Miss Guysi, of Detroit, and Miss Gearhart, of Los Angeles, are presented to illustrate further the tendency to relate art to the child's life and environment.

Miss Guysi, in her annual report for 1922, says:

The world was created beautiful. Beauty is a necessity for decent existence. The absence of beauty makes the city slum and the squalid home to the injury of the individual.

The real work of the art supervisor in the public schools is to provide experiences to the children which shall lead them to the appreciation of beauty in nature and art, thus enriching their lives and making them better citizens.

We believe this can best be done through teaching the fundamental principles of drawing and design. The instruction is centered around the life interests of the children as, first, personal; second, home and school; third, commercial; fourth, industrial; fifth, civic.

Miss Gearhart, in specific objectives, says:

1. Ability to recognize and enjoy the works of great artists and craftsmen.
2. Ability to select good wall pictures for school, home, office, and clubrooms; to choose suitable frames; and to hang pictures properly.
3. Ability to choose good pottery and tableware in regard to form, color, texture, and use.
4. Ability to arrange flowers in bowl or vase.
5. Ability to arrange fruits and vegetables for table decorations.
6. Ability to use a color theory with a correct vocabulary.
7. Ability to recognize and enjoy fine color in textiles, pictures, and nature forms.
8. Ability to build or select harmonious color combinations for costumes, home furnishings, and gardens.
9. Ability to letter, using simple capitals.
10. Ability to recognize the relation between lettering and design or illustration in book covers, programs, announcements, posters, advertisements, and printed pages.
11. Ability to choose or make good seasonal greeting cards, menu cards, and place cards.
12. Ability to arrange rugs and furniture in an orderly manner.
13. Ability to arrange articles on shelves, mantels, dressers, and tables in order.
14. Ability to choose suitable wall covering and floor covering in regard to color, design, and use.
15. Ability to discriminate between abstract design and pictorial representation and to decide the proper place of each.
16. Ability to recognize the relation of design to structural lines in dress, architectural details, gardens, and home furnishings.
17. Habit of visiting museums and art galleries.
18. Ability to visualize when one reads.
19. Ability to understand and use the following art principles: Repetition, subordination, space division, balance, order, variety, and suitability when considering pictures, buildings, furniture, costumes, designs, gardens, or natural scenery.
20. Ability to base choices on art principles when buying or designing rather than to be guided by passing modes introduced for commercial purposes, and to recognize fine line, form, and color in inexpensive materials as well as in expensive wares.
21. Ability to influence the retailer's stock by demanding art in industrial products.
22. Desire to add to the beauty of the home by eliminating objects not beautiful or useful.
23. Civic pride which demands fine buildings, fine street lamps and fountains and traffic signs, beautiful city streets and parks, and the elimination of billboards which detract from civic beauty.
24. Ability in graphic representation to convey information to builders, interior decorators, designers, and advertisers.
25. Ability to enjoy the art elements of dark and light, line, form, and color in natural scenery, in pictures, and in the industrial product.

HIGH-SCHOOL ART.

The foregoing has dealt chiefly with art instruction in the lower grades. In the high school the problem has more varied aspects. The rapid growth of the junior high school, with its prevocational

types of training, has added to the supervisor's tasks. The report of the New York State Educational Congress on Art in Secondary Schools indicates both need and trend during the past two years.

The junior high school. Above the sixth grade, an entirely different problem confronts us. The adolescent stage is approaching and the boy or girl begins to think and act in terms of more advanced, even adult, activity.

Now is the time to ascertain the pupil's capacities for certain kinds of work, his interests, and to discover if possible what his natural abilities may be. It is the period when we can "try out" the individual in various fields of life work. His inclination may be largely mental or largely manual. It may be professional or trade, commercial or industrial. Art teaching should seek to develop latent powers. At the same time the general knowledge of what constitutes a fine thing, good taste, beauty, should be instilled into the receptive mind of the pupil.

At present we find pupils entering high school with widely varying degrees of art knowledge. We believe, therefore, that every first-year high-school class should be required to pursue a general course in art training or art appreciation, a course permitting of the interpretation of beauty in innumerable ways. It should include a study of nature as applied to art, historic works of art, and modern manufactured forms. It should permit of enough practice to demonstrate the possibilities and limitations of art expression in a variety of mediums. Finally, it should bring before the pupils many direct applications which may be carried out in the common experiences of daily life.

Following this general course, which should seek to discover the talented, there should be offered special courses whose technical content is focused upon definite types of commercial, industrial, decorative, and graphic art.

We realize that the average high school is not equipped to offer successfully even one course in art instruction. When from two to five different classes have to use the same room, it is obviously impossible to equip or maintain that room as an art studio. A flat table for stenciling, drawing tables, a bench, space for illustrative material, a sink, shadow boxes, etc., are not possible in the room required for general recitation purposes.

The senior high school.—In the senior high school more definite steps should be taken toward specialization. Up to this time art education has sought to bring to the attention of the pupil various esthetic experiences, with definite reasons for selections, choices, or arrangements. Whatever taste has been developed was probably dependent upon one of two things, or perhaps both—first, convictions resulting from experience; and, second, statements of fact presented by the teacher and accepted by the pupil as final. This more general knowledge must now be directed toward somewhat prolonged and specialized types of artistic production.

Economic necessity for properly trained art and craft workers will sooner or later force more adequate equipment into the average high school.

In general, high-school art courses are elective, and oftentimes the courses are determined by the wishes of the greatest number of applicants for drawing. Such courses may do one of two things:

(a) They may find really talented students and send them on to professional training, or—

(b) They may offer additional opportunities for the development of good taste and intelligent appreciation. In any case, the courses are much more specialized than in the grades.

In New York City the following art courses are offered in the high schools:

Academic course.—In all Academic divisions of the high schools pupils are required to study drawing for two years, two periods a week. The first year is devoted to the

subject of applied design. Decorations in color are made for application to a variety of materials, and in a large number of classes, particularly in girls' schools, designs are worked out in the materials themselves.

In the second high-school year the required work consists of representative drawing done in outline from familiar objects. The plates made in the latter half of the year are submitted in examination for regents' credit.

Commercial course.—In the three-year commercial course offered in various high schools, drawing is a required subject only in the first year, two periods a week. Pupils are required to study lettering and later make a variety of signs, advertising cards, etc., as a practical application of the alphabets learned.

Fourth-year elective courses.—Special forms of work are offered as a one-year course in the fourth high school year on a basis of five periods a week, with five additional periods of home work. Six different subjects may be pursued in this fashion by high schools which organized classes for this purpose. The subjects are: Applied design, technical drawing, commercial design, interior decoration, history of art, and mechanical drawing. At present, as noted in this report, 14 high schools present this fourth-year elective work in one form or another.

Three-year elective course.—The three-year elective course may be offered by any high school which desires to organize classes for this purpose. The work is presented on a basis of five periods a week, with five periods of home study throughout the three years. This presents art as a so-called "major" subject. In the first year representative drawing is studied from a large variety of nature forms and in different media: Pencil, pen and ink, tempera, etc. In the second year the study of color is pursued, and later, the principles of design. A number of very carefully executed plates are required. In the third year the work is differentiated to meet the needs of the high school and may be offered as applied design, interior decoration, etc. At present, as noted in this report, 12 schools have organized elective courses of this description.

Industrial-art course.—This course is organized only in the Washington Irving High School. It offers to girl students an intensive course of training for professional work. The course is three years long. Six periods a week of drawing are offered in the first high-school year, and 20 periods in each of the second and third years. The first-year work and the first half of the second-year work is in representative drawing done from a large variety of models in different media. In the second half of the second year, the principles of color and design are studied; and in the third year, the pupils may elect to study commercial design, costume illustration, or textile design. The elected subject is pursued under very careful supervision for the entire year, and the students who desire to do so may further elect six months' postgraduate work in the school. The object of this course is to furnish practical designers for the trade, and the placement bureau has been successful in securing positions for practically every graduate who wished employment. These professional courses are under constant scrutiny by representatives of the trade, and every effort is made to prepare the students to meet the conditions required in the art industries.

Mechanical-drawing course.—In addition to the above courses, an elective course, two periods a week, of mechanical drawing, may be offered in the second and third high-school years. At present, only two high schools offer this course, other schools preferring to present it as a five period a week subject.

Referring to the questionnaire Dr. James P. Haney,² director of art in high schools, writes:

There are two features of our work at present to which I call special attention: (1) The development of the three-year elective courses. You will note in the report I

² Deceased.

sent you two years ago these had already been introduced into a number of schools. They are now in full working order in the several schools, and we are turning out graduates with three years of this so-called "major art work." Many of these graduates have gone well prepared to industrial art schools. The technical standards of the work, as you may surmise, are kept very high.

The second element I would note is the new art appreciation course. This was introduced for the first time in September, 1922, on a one period a week basis as an elective. It is the intention eventually to make this a required course of two periods a week in the third high-school year. Five schools are now carrying the work forward. In one of these, the Commercial High School of Brooklyn, all classes of the third year are required to take the work.

The scheme of this course follows:

ONE-YEAR COURSE, OF ART APPRECIATION.

General purpose.—The general purpose of this course is to present in simple form the principles of art and the application of these principles in such manner that the learners shall become increasingly sensitive to the esthetic elements of their surroundings. The pupil is to be taught that art is a practical and necessary thing and that no one can escape from displaying taste, or the lack of it. The pupils should learn that the principles of art are universally applicable in the daily round of existence, and that what we call "art appreciation" is only a brief way of describing the application of these principles to all forms of industrial and fine arts.

The course.—This course is to be given in tentative form in the school year, from September to June, one period a week. All pupils who can elect the work may be invited to participate, that an experimental class may be organized. The eventual purpose of the course will be to offer the work as a required subject in the third high-school year.

Tentative organization.—For the present the work will consist of weekly talks on "art appreciation," with abundant illustrative material offered in the form of pictures, photographs, lantern slides, and blackboard sketches.

Notebooks required.—Notebook work will be required, the students either taking notes from dictation or being given notes in hectograph or other form, which they can copy into their notebooks. If desired, the notes may be directly bound into the notebooks and illustrated by copies of the drawings made on the blackboard by the teacher and by clippings cut from newspapers and magazines, with graphic comments written under them by the pupils.

Recitation required.—The pupils should be required to recite upon their notes, either in the form of a brief recitation weekly or every second or third week, as may be found most desirable.

Division of work.—The first term's work will be confined to the explanation of the principles of design and color and the application of these principles to dress, interior decoration, industrial, and commercial art. The second term's work will deal with the application of principles to paintings, sculpture, and architecture.

Museum visits.—Museum visits are strongly urged, and pupils should be required to make notes of the museum work seen and incorporate these memoranda in their notebooks.

Similar progress in art instruction is being made in other city high schools, special emphasis usually finding expression in commercial and costume-design courses. Where costume-design work may be combined with sewing in the home-economics department, as in the

Dickenson High School, Jersey City, N. J., very strong and practical courses result. Such correlations are rare, though many attempts have been made.

COMPETITIONS AND EXHIBITIONS.

Competitions have undoubtedly done much to stimulate practical art work in the schools. Unfortunately, however, most of it consists of posters and offers only a limited field. Health posters and posters on forestry, pure food, safety first, education week, tuberculosis, and innumerable other activities have provided most of the work.

Here and there, however, may be found other phases of school competitions similar to those made possible by the Municipal League of New York, the Art Alliance, and the School Art League.

Too often competitions have been held in order to get a variety of ideas at little expense, and small money awards have acted as hindrances rather than helps in fostering the true artist spirit. In fact, money prizes are rather to be deplored unless they may serve as scholarships in promoting a student's art career. Medals, books, or similar prizes are more desirable than money.

There has been a growing demand for and use of exhibitions of materials and examples of related art work, especially in the high schools. Where museums are established in the town or city, marked advances have been made in their use by the school children, under the direction of the supervisor. Permanent and transient exhibits have done much to stimulate art in the high schools in particular.

PAGEANTS AND THE PROJECT METHOD.

The last two years have seen a much wider use of pageantry in the public schools, and in consequence increased activity in art. They have ranged from classroom dramatization to elaborately staged performances, with stage settings, properties, and costumes often designed and executed by the children.

The now widely accepted use of the project method of teaching has tended to promote art education, for art in all its phases touches some feature of practically all other subjects. Drawing, color, design, and handwork are all involved and are deemed most essential for successful project-method plans.

General methods.—There has been little change, generally, in the usual plan and method of teaching art. The grade teacher is usually expected to teach the drawing as she would any other subject. The supervisor may or may not give a demonstration lesson as the need arises. But here and there may be found pronounced departures from the usual procedure in both teaching and supervision. In Cleveland very definite arrangements have been made for museum trips, with demands made upon the children for drawings and sketches

of what they saw or studied. In Boston the Museum of Fine Arts has printed large charts of black and white reproductions of numerous examples of their collections and covering a wide variety of subjects, which are clipped, mounted, and studied by the school children. The use of museum collections and museum service is decidedly on the increase.

Memory and imaginative drawings have been emphasized in some places. A growing sense of the value of letting the child think for himself, as he would naturally, and to express himself similarly has developed in some places. The result has shown drawings of power and delight, but technically weak. Where this method obtains, the question of technic is frankly left to the high school and professional art school. There still prevails, however, the unconscious tendency with the average teacher and art-trained supervisor to bring adult methods into the child's life and to evaluate his efforts in terms of professional art. Where attempts have been seriously made to stimulate the child's imagination and to promote his own initiative in his expressions, the point of view of the artist critic has naturally changed to one of psychological investigation. There is promise of rich returns in the future along these lines.

Many teachers have continued the methods of "practical applications" in the use of varied materials and objects which the children color and decorate with crayons, oil colors, dyes, and colored fabrics and threads, and thus ornament for use what would otherwise be waste material. In support of this there has been a growing tendency for teachers to "load up" on problems of this type in summer classes throughout the country. To meet the needs of this work publishers and commercial houses have placed upon the market much new and valuable material for classroom use.

In many places there has been an increased effort to make more use of blackboard or demonstration drawing on the part of the teacher and even with the children, always a valuable help in teaching.

Probably Boston stands out as the one place of all others in the country where there is being made a quiet, serious effort to develop a well-rounded, scientific course of study based upon a plan extending over a period of experimental years. It is expressed clearly by Miss Cleaves, who writes:

In the Boston schools we have stopped teaching house furnishing, costume design, and craft work in the creative exercises, but are using all these fields as objects of appreciation and analysis. We divide the drawing into three types of work, as follows:

(a) Study of visual elements, geometric, and measured tones, to form a basis of shape and color knowledge and practice—a scientific foundation adapted to the ages of the children.

(b) Study, practice, and appreciation of order as a basis of structure and beauty in nature and art. We are attempting to use more science as a foundation for art practices than ever before, thus making art more teachable and understandable than heretofore.

(c) Study and draw facts of structure and appearance as a means of clearer thinking and seeing. Imaginative drawing is used throughout the course as a beginning and end of each series of lessons in representation, to "motivate" the study of perspective, structure, color, etc., as the case may demand.

We have stressed creative design, during the last two years, in order to establish a foundation for later work. We intend now to bring up the "object drawing" to a level corresponding to our achievements in design.

SHORTAGE OF TEACHERS.

The shortage of teachers during the war still prevails, even though salaries have failed to drop and in many cases have increased. In the last two years vacancies have appeared almost continually without diminish. There is urgent need for more young men to enter the teaching field, as well as women. The case of a graduating student from an eastern art school, in 1922, may be cited, who entered his position even before his school had closed on a salary of \$2,000.

CONCLUSIONS.

Unquestionably the Nation is awakening to a realization of the great importance of art in civilization and there is no doubt of increased art activity in education. The writer recently endeavored to obtain a bad example of vase form in some of the 5-cent and 10-cent stores of Boston. Unable to find any, he wrote to the companies asking if it were possible that the 5-cent and 10-cent store public were displaying more taste and greater discrimination in their purchasing. The replies received show that "the trend is toward the more artistic shapes and simpler designs, with subdued and less ornate styles of decoration. The gaudy and highly ornamented glassware is called for only by the foreign class."

The public schools, with their art education, have had a share in bringing about higher standards of taste, but other agencies have also been at work. There is an upward trend, and the past two years have witnessed the same tendency in the schools. The outlook was never better and the importance of art in education can not be overestimated. In recognition of this fact, the following resolution was presented to, and passed by, the American Federation of Art, May 19, 1922:

Whereas art is to-day conceded to be an important element in education, contributing generously to the fullest appreciation and highest expression of the ideals of human life; and

Whereas instruction in art as a general educational subject is to-day being effectively carried on in many of the high schools of the United States: Therefore be it

Resolved, That it is the sense of this Thirteenth Annual Convention of the American Federation of Arts that attention should be called to the present significance of art and to the importance of art instruction in the schools; and further be it

Resolved, That a copy of these resolutions be sent to the National Commissioner of Education and to the commissioners of education in the several States, with the

request that they be referred to the proper authorities and that the subject of art be accorded the recognition for college entrance that it deserves as a major subject in the high-school course of study.

But in our enthusiasm of the moment the art educator must not fail to give ear to what are seemingly some of the earlier and worn-out aims of this subject. It is well to listen to the thought of the greatest educator of our day, Dr. Charles W. Eliot, who writes as follows, on *Changes Needed in American Secondary Education*, in *Occasional Papers*, No. 2, General Education Board, New York City:

Drawing and music, like other fine-art studies, were regarded by the Puritan settlers of New England and by all their social and religious kindred as superfluities, which, if not positively evil, were still of wasteful or harmful tendency, and were, therefore, to be kept out of every course of education. By many teachers and educational administrators music and drawing are still regarded as fads or trivial accomplishments not worthy to rank as substantial educational material, whereas they are important features in the outfit of every human being who means to be cultivated, efficient, and rationally happy. In consequence, many native Americans have grown up without musical faculty and without any power to draw or sketch, and so without the high capacity for enjoyment, and for giving joy which even a moderate acquaintance with these arts imparts. This is a disaster which has much diminished the happiness of the native American stock. It is high time that the American school—urban or rural, mechanical, commercial, or classical, public, private, or endowed—set earnestly to work to repair this great loss and damage.

Although considerable improvements have been recently made in the programs of American secondary schools, especially within the past 10 years or since vocational training has been much discussed, multitudes of Americans continue to regard the sense-training subjects as fads and superfluities. They say the public elementary schools should teach thoroughly reading, writing, spelling, and arithmetic, and let natural science, drawing, music, domestic arts and crafts, and manual training severely alone. Let the secondary schools teach thoroughly English, Latin, American history, and mathematics, with a dash of economics and civics, and cease to encumber their programs with bits of the new sciences and the new sociology. This doctrine is dangerously conservative; for it would restrict the rising generations to memory studies, and give them no real acquaintance with the sciences and arts which within a hundred years have revolutionized all the industries of the white race, modified profoundly all the political and ethical conceptions of the freedom-loving peoples, and added wonderfully to the productive capacity of Europe and America.

In elementary schools the last two years have seen a tendency toward a closer correlation with the school, home, and industry, and a general feeling that here art is a general, not a special, subject.

In the high schools greater specialization has been apparent, with increasing emphasis on commercial and industrial art, costume design, and art in the home.

With proper recognition of the value of good drawing, correct design, and sound construction in all art applications, the future of art education is assured. Then the presence of the art teacher in the educational system will leave its imprint of beauty on the child, in the school, at home, and in the community.

CHAPTER XVIII.

RECENT ADVANCES IN INSTRUCTION IN MUSIC.

CONTENTS.—Part I—In the public schools: Recent acceleration; movements as revealed in associations of supervisors and teachers of music; high schools and colleges; State departments of public instruction; instruction in instrumental music; music appreciation; vocal technic; extent of instruction under special teachers or supervisors of music. Part II—General: Music organizations; preparation of music teachers; number of music schools.

PART I.—IN THE PUBLIC SCHOOLS.

By WILL EARHART.

RECENT ACCELERATION.

Never has the education of all of our people been seen to be a matter of such vital importance as in the light thrown upon it by the problems growing out of the World War and out of the reconstructive processes seen to be necessary since the struggle closed.

The place of music, like the place of all other subjects, came to be better understood during the period of the war and in the years following. During the war its efficacy in developing unanimity of feeling among masses of people, soldiers and civilians alike, who needed in an hour of crisis to feel their social solidarity and brotherhood, became manifest. After the war it became evident that sympathetic and exalted feeling was as important to the world as accurate thinking; that the mind could construct the highway of progress but that the heart alone could tell of the goal to which that highway must lead if the souls of men were to be satisfied. Music is one of the factors that can help to give the soul such vision of its destiny.

Whether music received from the general stimulation more impetus than other subjects can not be calculated. A gradual accession of energy in its study and practice has, however, been observable in these last few years, and the last biennium has resulted in some advances that are important as achievements and more important as forming the bases upon which future progress will rest. To define and analyze these is the aim of this report.

MOVEMENTS AS REVEALED IN ASSOCIATIONS OF SUPERVISORS AND TEACHERS
OF MUSIC.

Associations of supervisors and teachers of music have been, for a number of years past, large, active, and in sufficiently close touch with the field of practical endeavor to make them the foci in which all important movements and discussions converge and can be studied. In addition, they have themselves originated much that is of very great value.

In particular, as related to public-school music, the Music Supervisors National Conference has been very effective. Organized in 1907 by a small group of supervisors, it had attained a membership in 1920 of 1,417, in 1921 of 1,450, and in 1922 of 1,860. Its annual meetings are attended by more than 1,000 supervisors and by educators of national reputation; its books of proceedings cover every aspect of public instruction in music and all allied endeavors. Its meetings have proven to be strongly stimulating to the cause of music in the territory in which they are held. In response to a demand for such stimulus in the South, the conference met in 1921 in St. Joseph, Mo., and in 1922 in Nashville, Tenn. The Music Supervisors Journal, published by the conference, gives additional aid to the cause. It is published five times a year, and is mailed to 12,000 supervisors.

Progress in public instruction in music must be largely credited to this conference. Perhaps the best evidence of its power is the organization of sectional conferences. These are due at once to recognition of the value of collective study and effort, as exemplified by the National Conference, and the impossibility of attendance upon its meetings on the part of thousands of supervisors who are always remote from the place of meeting of the National Conference, wherever that may be.

An eastern conference, which held its fifth annual meeting in 1922, was accordingly organized; and the meeting of the National Conference in Nashville in 1922 led directly to the organization of a southern conference, as supervisors from the South saw the National Conference about to depart from them to meet in 1923 in some possibly far distant city. The organization of a western conference is strongly desired and is probably but a matter of a year or two. These various conferences will probably be closely affiliated, as none wish to see lost the strength that comes from sympathetic, nation-wide cooperation.

The Educational Council of the Music Supervisors National Conference.—In 1918 the National Conference organized and elected the members of an educational council. This body at once addressed itself to the investigation of a number of important sub-

jects, and in 1921 the completed results of three of its studies appeared. They constitute a valuable contribution to the cause of public instruction in music.

A standard course of study in music for elementary schools.—Organization and interchange of opinion among teachers naturally led toward agreement upon essential features of a course of study in music and a desire to attempt a formulation of these in the interests of further unification. In 1921 the educational council, after long and difficult effort, presented for the consideration of the conference an outline for a standard course in music for graded schools, and after very brief debate it was unanimously indorsed by the conference. The outline describes in a general way, for each year of the elementary school years represented by the "eight-four" plan, the aims, matériel, procedure, and attainments thought to be appropriate. It is necessarily broad enough to permit much individual interpretation, especially as to procedure (or method), but is still sufficiently specific to make it of untold value as a guide to the young or inexperienced supervisor, and to superintendents who have formerly had only the opinion of their own supervisor to guide them. It doubtless is imperfect and not wholly satisfactory to any one supervisor because of the very flexibility which made it acceptable to supervisors collectively; but notwithstanding its necessarily general character it was hailed by the conference as a most notable step toward stronger teaching.

A standard course for training of supervisors of music.—But the same report of the council included a broad outline for another course which is of hardly less importance. Courses for training supervisors of music have long been inadequate in their number and frequently weak in their content. Normal schools had provided courses for the grade teacher in music (and these were often pathetically weak) and sometimes offered courses for training supervisors. But the normal-school time was usually altogether too brief for the accomplishment of the task, and entrance requirements that would have strengthened their hands were not prescribed. A few schools of education in universities offered four-year courses of satisfactory content; but many of these courses, where offered at all, stressed academic and general education courses so strongly that they left insufficient time for the acquisition of strictly musical knowledge and necessary musical skill. On the other hand, many music conservatories offered courses of varying degrees of merit; but these, while usually strong in features of general musical knowledge and skill, were woefully weak in educational content and in specific training in the theory and practice of public-school music teaching. Obviously a middle course that would require at once

adequate musicianship and proper general education and professional training was needed. Such a course, as well balanced as it seemed possible to make it, was outlined and reported by the educational council to the conference for its action in connection with the standard course in music for graded schools. Like the latter, it was received with keen interest, and after brief discussion was unanimously adopted by the conference. Results have even now begun to be felt. Several colleges and universities have already adopted it and a larger number have modified their courses into more strict conformity with its provisions. A definite step has thus been taken toward standardizing courses for training supervisors of music, and it is safe to say that in time every such course projected will feel the tonic effect of the conference action.

MUSIC INSTRUCTION IN HIGH SCHOOLS AND COLLEGES.

The educational council participated in a third investigation which bore fruit in 1921. Instruction in music in our public high schools was, until the twentieth century was well begun, almost negligible. In the years following, a great advance was made. Courses in harmony and in appreciation of music, and instruction in not only orchestral and band ensemble but, in some cases, in the technic of band and orchestra instruments, were added in astonishing numbers to the chorus practice that had earlier constituted the sole musical endeavor in most high schools. The practice of giving high-school credit for "outside" study (i. e., the study of specialized musical technic under teachers outside the school) also grew to relatively great proportions.

An inquiry into the extent of the study of music in high schools, accordingly, became a matter of interest in itself; and closely allied with such interest was the question of the practice of colleges in accepting high-school credits in music as entrance credits, and in giving credit for the study of music during the college term.

Much of the high-school music of the past was worthy of small credit in either high school or college; but it was believed that more advanced study of music in high schools, such as was becoming common, was entirely worthy of credit. Yet students in high-school music classes were often prospective college students and needed their full quota of college entrance credits; and these, unless music were included, they could not gain unless they sacrificed their study of music at a time when, as a skill, it required assiduous application.

Under the direction of the National Education Association and the Music Teachers' National Association a joint committee undertook a study of music instruction in high schools and colleges. Two members of this committee were members of the educational council of

the Music Supervisors' National Conference. The council, therefore, further accredited the committee and gave it aid. The report of the committee was published by the Bureau of Education as Bulletin, 1921, No. 9. More than any other evidence this report gives conclusive proof of the growing strength and prestige of music as an educational subject. Also its publication and distribution will lead to serious consideration by officials of colleges and high schools of their practice with relation to music as compared with that of other institutions of their type. The result will certainly be to stimulate further the serious study of music; and the publication must accordingly be reckoned as a significant step taken in the last biennium.

The educational council formulated a plan for giving high-school credit for the study of music under "outside" teachers. The growth of this practice would have been still greater had it not been for the suspicion with which it was regarded, first, because of the dangers inherent in its administration, and, secondly, because organized effort and authoritative pronouncement had not yet been given to it in sufficient measure. In 1922 the educational council submitted to the conference a plan for supervising, regulating, and accrediting such study. The plan was adopted unanimously by the conference. It has since been made official for the State of Pennsylvania, so its career of usefulness has already begun.

MUSIC IN STATE DEPARTMENTS OF PUBLIC INSTRUCTION.

Three State departments of public instruction are now employing a State director of music. In each of these three the position was first established in 1919 or later. In Pennsylvania a complete reorganization and extension of the State department of public instruction has been made, and the new and strengthened department has not only engaged a State director of music but has ably assisted him in making far-reaching improvements in the status of music and the teaching of it in the State.

Following is a brief list of accomplishments that have already been made since the director of music assumed office:

1. Music is considered a major subject, with adequate time allotment.
2. The State assumes the same responsibility for the training and certification of its teachers of music as it does for its teachers of English or mathematics.
3. Definite musical attainment is required for every elementary-school teacher's certificate.
4. Adequate training in music is now offered in normal schools. Music is required of all normal-school students, and attractive salaries have made it possible to secure strong teachers.
5. A syllabus for music in elementary schools and in high schools is now in print. (The syllabus for elementary schools is the one adopted by the Music Supervisors' National Conference.)

6. A plan for giving high-school credit for the study of specialized musical technic under teachers outside the school has been submitted and authorized for the State.

7. A Pennsylvania State Music Week was proclaimed and was widely observed in 1922 and will be observed again in 1923.

The adoption of fixed and proper standards of attainment in Pennsylvania for the grade teacher in music and the supervisor of music is an attainment of prime importance. Music will not hold the place it deserves in our schools, or deserve the place it should hold, until school authorities everywhere take measures to safeguard its teaching such as they take for other subjects. The program in Pennsylvania in this and other respects is so comprehensive that it deserves to be cited as above.

The first State supervisor of music in Ohio was appointed October 1, 1922. Though the appointment was so recent, the benefits that may always be expected to follow from having a specialist in charge of instruction in music in a State have already begun to appear. They are thus reported, in summary:

1. A music section convened for the first time at the State educational meeting during the holidays, 1922, an important part of this being an all-State-high-school orchestra, composed of 130 pupils from about 35 different towns and cities. This orchestra played a program after a one-hour rehearsal.

2. Music has been placed in the schools in a large number of rural communities which never had it on their curriculum before. A movement is started to place music in *every* school in the State.

3. A State-wide music memory contest has been started, with lists of music for rural grades, high schools, and adults. This latter list will make it possible to include normal schools and colleges.

4. Standardized courses in music are formulated for both elementary and high schools. Credit is allowed for applied music, and four credits in music are allowed for high-school graduation as against one previously.

5. A standard course for State normal schools and county normal schools is in the making.

6. All elementary teachers are to be equipped within a certain period of time to teach music in their schools.

The State Department of Education of Maryland has had a State supervisor of music since 1919. The report of the State supervisor of music for 1921 closes with a summary which is here quoted:

The following is a brief statement of the directions in which efforts were made during the past year to extend and improve the teaching of music in the schools of the State:

1. Plans were made, and to some extent carried out, for a more thorough training of teachers in the subject—(a) in the normal schools; (b) in the summer schools; (c) in the special school of music; (d) at teachers' meetings; (e) through observation work in the subject conducted during the school year by the State supervisor and special teachers.

2. A tentative, standard course was formulated, certain features of which are to be stressed each year until teachers are made familiar with the entire course.

3. Through community singing and addresses on the subject, at club and community meetings, school patrons were led to feel the value of the subject both in and out of the schools.

4. Full-time, thoroughly trained teachers in the subject have been placed in one of the normal schools and in counties where the conditions have made it seem practicable to do so.

5. A policy, looking forward to the training eventually of all elementary teachers in school music, was planned.

6. Through the organization and training of orchestras and glee clubs, and through plans to give musical instruction in practically every high school, a policy has been established looking toward the time when these schools themselves will furnish the music for all graduation programs, for holiday and anniversary events, and for many community functions. In a number of the schools such service was rendered during the past year.

7. Those schools which from time to time give musical entertainments were advised as to the best type of music for such functions in schools of different character. Children's concerts, simple musical festivals, and pageants are forms which both in the preparation and in the rendering seem to prove of most value.

The State Department of Education of New York first established the position of State director of music in 1918. The department reports:

We have had a State supervisor or director of music in this department for several years. At the present moment, however, the position is vacant because of a recent resignation.

It would be quite impossible within brief compass to outline the resultful work that has been accomplished through the work of the State supervisor of music. There has been increased interest in work in music, not so much in the larger communities where this work is already definitely organized, but more particularly in the smaller communities where the need for adequate instruction in music and music appreciation is quite as vital. It is hoped that the position will be filled at an early date.

The State of Texas, while at present without a State supervisor of music, has made significant steps toward aiding instruction in music in its public schools. In 1919 a supervisor of music was appointed as a member of the division of rural schools, in order that the State department of education might have the services of a specialist in music. This State supervisor of music formed a committee which formulated courses in music for elementary and high schools. The report of the committee on high-school music is issued separately by the State department of education as Bulletin 119, June 15, 1920. It is complete and progressive, and upholds high standards. In a "Manual and Course of Study, Elementary Grades, Public Schools of Texas, 1922-23 (Bul. 152, Sept., 1922, Dept. of Education, State of Texas)" the committee advances a similarly thoughtful and comprehensive outline for elementary schools. These documents can not be fully analyzed here, but it should be said that they must unquestionably have proven very helpful and stimulating. The State

supervisor of music resigned, and no other person qualified for the music work has been found who was willing to take the position of rural-aid supervisor. Happily the work that was accomplished lives on.

INSTRUCTION IN INSTRUMENTAL MUSIC.

Before 1905 school orchestras and bands, as a feature of school music generally, were few in number and modest in instrumentation and capability. There has been continual development since that time, but the movement has gained so greatly in impetus in late years that the progress of earlier years is almost overshadowed. The last two years have seen orchestral and band ensemble take place as a regular and integral feature of school music, upon which supervisors expend quite as much systematic effort, proportionately to the numbers of pupils involved, as they expend on the vocal features of their work. The course for training supervisors indorsed by the music supervisors conference in 1921 expressly provides training in the technic of orchestral instruments and in orchestration, 8 hours out of 120 required for graduation being prescribed for such study. No junior or senior high school of any pretensions with respect to its music program is now without its orchestra; and many elementary schools maintain or encourage the organization of small ensemble groups which practice faithfully orchestral or concerted music of good musical quality with results that are at least comparable, as to musical quality, with the results attained in vocal practice. Many thousands of dollars, in ever-increasing amount, are expended annually in the purchase of orchestral and band instruments, which become school property and are loaned, under suitable safeguards, to pupils who will prosecute the study of them and use them in ensemble practice.

The orchestras meanwhile have increased greatly in size, in instrumentation, and in proficiency. Many are of symphonic proportions and are playing well music of symphonic character. French horns, oboes, and bassoons, once unknown to the high-school orchestra, and even more rare instruments, are now frequently found. Bands, while not so numerous as orchestras and not capable of playing, by reason of their instrumentation, as high a grade of music as orchestras, have experienced a proportionate development.

But instruction in instrumental music in public schools has not stopped with the training of ensemble groups. Class instruction in violin, which had its beginning in England, soon found place in this country. For many years it was restricted to a few large cities. Slowly at first, but in the past few years with extraordinary rapidity, it has been adopted in other cities and towns. Its latest advance has been one of recognized integration into a regular system

of school music practice. A large literature on the subject, consisting of graded material to be used in instruction, handbooks for teachers, discussions of methods, results and administrative problems, has begun to make its appearance and already has assumed fair proportions. Meanwhile the practice has spread so rapidly that it has outrun statistical inquiry and record. Towns of 10,000 to 20,000 population frequently have one or two hundred school pupils receiving class instruction in violin. One large city reports 3,100 pupils receiving such instruction. In the aggregate there must be many thousands of such pupils in the United States; but the exact number must remain conjectural for some time, because the growth continues to outstrip the facilities for gathering information. Most of this instruction is given during school hours in some schoolroom that can be released for a time for the purpose; otherwise the schoolrooms are utilized after school hours. Sometimes the instruction is at public expense, the instructors being regularly employed by the local board of education. In other cases the pupils pay a small fee per lesson—from 10 to 25 cents usually—and the board of education provides only the room and building facilities and the instruction books. The pupils in almost all cases provide their violins and instrumental equipment.

Other orchestral instruments, such as basses, cellos, flutes, clarinets, cornets, trombones, timpani, etc., while studied by fewer pupils on account of their cost or their limitations as solo instruments, especially in relation to the home, have not been neglected. Much class instruction in cornet is given, and in some cities there are classes in all the instruments mentioned and in all the remaining instruments of the orchestra and band. Textbooks which present graded courses for use in class instruction in cornet, trombone, etc., have lately appeared in print, and thus give evidence of a demand. But where class instruction is lacking on account of smaller numbers applying, there is still much instruction in these less-favored instruments, given at school expense or under school auspices to individuals or small groups of two or more members. A teacher or supervisor of instrumental music who also has charge of much ensemble work may give such instruction. The school, however, usually owns these other instruments and, reversing its practice with respect to the violin, provides the instrument. But if no instrumental teacher who is familiar with the particular instrument is regularly employed by the school, the cost of instruction is likely to be placed upon the pupil, under such advantageous arrangements as the school is able to make for him.

In addition to orchestral and band instruments the piano has become a subject for class instruction in a large number of schools,

and many thousands of pupils are members of public-school piano classes. Carefully devised musical textbooks for their use are already published and widely used, and the present extent of instruction is so great that it has led to that discussion and interchange of opinion that is necessary to further development. Instruction is frequently at public-school expense, since regularly employed teachers of music are likely to have more knowledge of piano than of any one orchestral instrument. Statistics have not kept pace with the growth of the work, however, and no figures can be quoted as to administrative plans or the number of pupils now enrolled. It is safe to say, however, that this instruction has now passed the experimental stage and is lately coming to be recognized as a valid feature of public instruction in music.

The value of instruction in instrumental music in general can not be overestimated. To master the technic of an instrument unquestionably enlists more powers of the individual than are required for singing. In the case of piano, the music has many tones. These first give an individual experience in harmony that is lacking in vocal practice. A matter of greater importance is that piano music requires independence of hands and fingers, many different rhythms and musical patterns being woven together into a musical structure of much more than monophonic simplicity. The powers used are also different from those used in singing; and since the piano pupils also sing, their piano practice represents a very rich additional development. This same fact holds true in the case of the study of any orchestral instrument. But most important is the fact that instrumental music introduces the pupil to "pure" or "absolute" music, while all his other music in school leads him to regard music as "song story"—description, narration, or picture of some event or situation of worldly importance. It is futile to expect intelligent audiences for our symphony and chamber music concerts, futile to expect intelligence with respect to most of the music of Bach, Haydn, Mozart, Beethoven, and many later composers, if the sole musical instruction of our people has consisted of the singing of unison and part songs of elementary-school or even high-school range. They must be brought to a comprehension of music as beauty of tone, beauty of tonal design, tonal architecture of idealistic nature that is remote above the clash of worldly feeling, before they understand music as the musician understands it. And there is no agency in our public schools that tends to bring this about so promptly and surely as the study by the pupils of musical instruments alone and in ensemble.

It is notable, too, that this attention to instrumental music represents an advance from the general to the specific, from vaguely cul-

tural to definitely technical instruction. The cultural values are by no means lost. They are rather greatly enhanced. But placed under them, to give them greater firmness of base and permanent strength, is a definite technical accomplishment which has wrought itself into the pupil's physical, mental, and artistic nature by dint of happy but earnest application.

MUSIC APPRECIATION.

Mechanical instruments for reproducing music, aided by an advancing musical culture in the nation as a whole, have led to the inauguration of systematic instruction in appreciation of music in large numbers of schools and some attempts of the kind in the majority of schools. One form which this effort has taken is that of music memory contests. Hundreds of schools have by this plan made thousands of children acquainted with a large range of pieces of the world's best music. The Bureau for the Advancement of Music, aided by the General Federation of Women's Clubs (music department) and the National Federation of Music Clubs, has done much work in assisting schools to organize these contests. Entirely apart from them, however, there is an increasing amount of regular instruction along lines of musical appreciation in elementary schools. It must be confessed that, owing to the very nature of the subject, this work is not as clear as to aims and as well defined as to its essential processes as almost any other phase of public-school music. To teach children to know and love good music (and this implies that they are also brought to recognize and have a distaste for vulgar, tawdry, flimsy music) is much more difficult a problem than to teach them a technic or skill, for it requires a molding of the child's deepest and most essential affective states. Often, it may be, true appreciation results not from the teaching that is done but in spite of it, as a consequence of the musical experience itself, which works its way serenely, notwithstanding the interrupting voice of the teacher. Certain it is that an unfailingly good and pure musical experience would be the surest foundation for later appreciation. Equally certain is it that appreciation is something to be caught, not taught, and that the feeling of the teacher, as in the case of moral teaching, is most powerful in arousing similar feeling on the part of the pupil. But it is difficult to translate the impartation of states of feeling into definite schoolroom processes; and teachers are consequently driven to making (and to evoking from the pupils) observations, comments, analyses, that may be positively interruptive and tangential in character, and which may spoil the elusive and unanalyzable mood that the music itself might create. The very voice of the teacher, as well as what he says, must be attuned sym-

pathetically to the music if a contribution and not an interruption is made by his remarks. But whether full efficiency is attained yet or not, it is certain that in this latest phase of public-school music we have something of untold value and illimitable possibilities. The thought and effort now devoted to it can be relied upon to bring the necessary refinements in a few short years.

MUSIC IN HIGH SCHOOLS.

Mention has herein been made of the fact that systematic instruction in music of high-school grade is of late introduction in high schools. The progress so lately begun has never halted. The addition to chorus practice of instruction in orchestral ensemble, the technic of orchestral instruments, courses in harmony and courses in musical appreciation have already been noted. The instruction in harmony, it should be further stated, is not rudimentary but is frequently as serious, thorough, and efficient as that done in a good conservatory of music. A two-year course, on a five-hour per week basis, fully credited, and including thorough ear training and original composition, is not at all uncommon. Class songs, musical compositions for school entertainments, even entire cantatas, the music composed by the harmony students and the text, costumes, staging, scenery, worked out by the English, art, and physical training departments, have been produced in the last two years on more than one occasion. The musical appreciation, similarly, is often on a five-hour basis, and consists not only of provision of a rich musical experience, but also, because the age of the pupils now makes it possible, of a thorough examination of the characteristics that give good music its fineness, strength, and beauty or, by their absence, make music flimsy and inane. Much illuminating study of musical history, biography, and form is necessarily included.

VOCAL TECHNIC.

The progress of definite technical instruction on musical instruments has begun to react upon vocal practice in high schools and to a lesser extent in elementary schools. Supervisors of music are beginning to see that, although instrumental instruction in the schools is recent, it has soon attained a position in the minds of pupils, parents, and other teachers, and has produced educational results in the learner that in some ways have surpassed the effects produced by the long years of study through the medium of voice alone. The conclusion to which this leads is that indefinite cultural instruction (definite only in point of sight singing) is inferior to definite instruction that includes the same cultural values and the same technic of sight reading, but that adds a technic of means of

expression besides. Why should pupils not have specific vocal training to sing in chorus, just as they have specific instrumental training to play in orchestra, is the question. Moved to the conclusion that such-vocal training is equally practicable and desirable (or more so, since a much greater number of persons sing), high schools have begun to give class instruction in voice, and more of definite vocal technic is taught in elementary schools. In high schools the effect is often magical. Pupils—boys especially—who have taken little interest in chorus practice because it seemed to consist of learning one piece of music after another, become keenly interested when a technical accomplishment is sought. And the cultural value becomes greater; for when the pupil seeks greater beauty of tone and a voice control that will give him an adequate medium for the expression of musical effects he is at once on the road toward true musical effects. Of course, vocal technic, like any technic, might become academic; but in public schools there is little danger that application of technic to the production of the best music possible will ever be neglected. The next wave of progress in our public-school music is likely to be a vast increase in instruction in voice production and management, applied in beautiful singing.

EXTENT OF INSTRUCTION UNDER SPECIAL TEACHERS OR SUPERVISORS OF MUSIC.

The improvements which have been described are of the nature of intensification and refinement in instruction. The World War had one effect of a less gratifying nature. During its progress and after its conclusion the financing of our public schools became a difficult problem. Money for adequate maintenance of public schools was often not available, and in many places retrenchment was made. Special teachers of music were frequently relinquished under this financial stress. Usually the study of music was continued, and the measure was usually regarded as a temporary one. Nevertheless, the relinquishment of special teachers of music has undeniably resulted in a relative loss of forward movement, even if intensification of study has prevented any absolute loss, or has even more than counterbalanced the loss of special teachers. Further, musicians—actual and prospective, and including private teachers, performers, and public-school music teachers—found that there was a great demand for other types of service and other kinds of vocational work; and these other activities either seemed at the time to satisfy a more urgent social need or to pay a much higher rate of compensation—or both. There was consequently some decrease in the number of persons engaged professionally in music and a corresponding increase in the number engaged in other lines of work. The extent of this change in the last biennium can not be ascertained;

but the following statistics from the United States census for 1910 and for 1920 tell the story; and it is safe to say that the greater part of the shift in proportions occurred after 1915 and not before.

TABLE I.—*Number of persons engaged in various professions.*

[Compiled from Occupational Statistics, United States Census, report for 1920.]

Professions.	In 1910.			In 1920.		
	Total.	Male.	Female.	Total.	Male.	Female.
School-teachers.....	595,306	118,442	476,864	752,055	116,848	635,207
Trained nurses.....	82,327	5,819	76,508	149,128	5,464	143,664
Physicians and surgeons.....	151,132	142,117	9,015	144,977	137,758	7,219
Technical engineers.....	88,755	88,744	11	136,121	136,080	41
Musicians and teachers of music.....	139,310	54,832	84,478	130,265	57,587	72,678
Clergymen.....	118,018	117,333	685	127,270	125,483	1,787
Lawyers.....	114,704	114,146	558	122,519	120,781	1,738

The next table relates solely to teachers or supervisors of music in public schools. The figures are compiled from the best statistics available and may be relied upon as substantially correct. The figures, it will be observed, are for 1919 and 1922.

TABLE II.—*Percentage of towns of 1,000 population or over having special music teachers.*

States.	Percent- age having special teachers in 1919.	Percent- age having special teachers in 1922.	States.	Percent- age having special teachers in 1919.	Percent- age having special teachers in 1922.
Alabama.....	24.7	18.3	Nebraska.....	58.6	52.8
Arizona.....	80.0	64.2	Nevada.....	25.0	8.3
Arkansas.....	24.3	18.9	New Hampshire.....	62.1	62.1
California.....	48.3	59.6	New Jersey.....	70.7	71.4
Colorado.....	55.0	46.6	New Mexico.....	55.5	65.0
Connecticut.....	44.3	44.8	New York.....	58.1	56.9
Delaware.....	7.1	14.2	North Carolina.....	17.3	17.8
District of Columbia.....	100.0	100.0	North Dakota.....	57.1	64.2
Florida.....	40.0	43.3	Ohio.....	56.8	49.4
Georgia.....	25.0	25.0	Oklahoma.....	21.8	20.5
Idaho.....	41.0	12.1	Oregon.....	47.9	47.9
Illinois.....	45.5	52.8	Pennsylvania.....	63.4	60.2
Indiana.....	62.9	71.2	Rhode Island.....	42.8	42.8
Iowa.....	73.4	77.4	South Carolina.....	15.7	14.4
Kansas.....	35.8	35.2	South Dakota.....	45.7	45.7
Kentucky.....	31.8	30.7	Tennessee.....	23.8	22.6
Louisiana.....	30.1	26.7	Texas.....	19.1	19.1
Maine.....	29.1	13.7	Utah.....	38.6	40.9
Maryland.....	25.6	17.0	Vermont.....	46.2	35.8
Massachusetts.....	69.7	75.3	Virginia.....	20.3	21.2
Michigan.....	66.3	61.2	Washington.....	54.7	55.8
Minnesota.....	42.6	41.7	West Virginia.....	42.8	50.7
Mississippi.....	43.1	38.8	Wisconsin.....	72.1	49.6
Missouri.....	31.3	32.9	Wyoming.....	73.3	80.0
Montana.....	65.3	53.5			

The details of this table may appear discouraging. It must be remembered, however, that failure to employ a special teacher of music, on account of financial stringency, does not imply, by any means, abandonment of instruction in music in such schools. Often

the greatest effort is made to continue adequate instruction despite the necessity, reluctantly recognized, of economizing by temporarily releasing the special teacher of music. In Pennsylvania, for instance, there is unquestionably more widespread instruction in music in public schools now than in 1919; but it is obviously carried on by regular grade teachers and not by an increased number of special teachers. Further, refinement and invigoration of study have far outweighed the results of the loss of special teachers—though it is to be deeply regretted that extension, as well as intensification, could not have taken place. The total, too, is less discouraging than many of the separate entries; for taking the United States as a whole we find that, in 1919, 46.4 per cent of all towns and cities of 1,000 population or over reported having special teachers or supervisors of music; and in 1922 the number had decreased only to 45.7 per cent. There is an actual gain during the period in the number of towns employing supervisors of music; and the relative decrease, as shown in the percentage, is only seven-tenths of 1 per cent. Besides, we must remember that there has been the most severe retrenchment in all forms of expense for public schools. Building has been greatly restricted. School after school has announced publicly through the newspapers that unless some extraordinary means of securing revenues could be found the schools would be forced to close. In the light of this general retrenchment, and in view of the general conditions that have been described with respect to public instruction in music, the small relative decrease in the number of special instructors may be regarded as negligible.

PART II.—GENERAL.

By CHARLES N. BOYD.

In the fields of music schools and private music teaching there is no solidarity of organization or uniformity of method comparable to that obtaining in the related activities of public-school music. But two organizations aim at national scope. The first is the Music Teachers' National Association, organized in 1876; which held its forty-fourth annual meeting in New York December 27-29, 1922. The membership varies between 400 and 500 and represents nearly all the States of the Union. The fact that this membership is only one-third of 1 per cent of the total number of music teachers reported by the census of 1920 is proof of the conditions mentioned above as characteristic of the individual teachers. The object of the Music Teachers' National Association is the advancement of musical knowledge and education in the United States, and this object is promoted by the annual meetings and the printed Proceedings containing the numerous papers read on educational topics at the meetings. These books have had a wide circulation and are found in many public libraries. During the past two years this association has continued its work along accustomed lines, with standing committees for the departments of American music, organ and choral music, community music, history of music and libraries,¹ public-school music, standardization, affiliation, and music in the college.

The other organization of national scope is of still more limited membership, as its title implies, the Association of Presidents of State Music Teachers' Associations. Membership is limited to these officers in the National and State music teachers' associations. Organized in 1916, the specific objects are the establishment of a uniform standard for examinations for music teachers (before an examining board), and the promotion of music as a major subject in all educational institutions, including high schools. This organization has so far exerted a stronger influence in the Western and Southwestern States than in the eastern portion of the country. It has granted certificates to teachers passed by the examining boards, and has outlined four-year high-school courses in applied

¹ This committee prepared the report on the music sections of public libraries throughout the United States, published as Bureau of Education Bulletin No. 33, 1921.

music (voice, violin, piano), as published in the Music Teachers' National Association Proceedings for 1921, pages 121-132.

As may have been inferred from the preceding, there are also State associations and other regional groups of music teachers. The course of such organizations is at best precarious, for two reasons—first, the indifference of the average independent music teacher; and, secondly, the difficulty in finding officers who can or will make the necessary sacrifices to promote movements of any size or importance. In 1919 the following State associations were listed: Arkansas, California, Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, New York, Nebraska, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Texas, Vermont, Washington, and Wisconsin. In 1920 Idaho and Virginia were added, but apparently 1921 saw no new organizations of this kind. Their activities have been most pronounced in the Western and Southwestern States, which appear to have been the leaders in a demand for some sort of standardization in music teaching and recognition of well-qualified teachers.

PREPARATION OF MUSIC TEACHERS.

The past two years have been marked by decided agitation in the matters of the music teacher's preparation, authority, and his actual work. As yet no such regulations obtain as are found in the professions of medicine, dentistry, and law. Any person is legally free to announce himself or herself a private teacher of vocal or instrumental music, regardless of preparation or fitness, and in consequence the country is overrun with self-styled teachers whose work ranges from what might be termed mildly incompetent to examples which should be styled criminal. Even an approach to desirable legal regulation of music teaching has yet to be found in this country, but the leaders in the music-teaching profession throughout the United States are among the leaders in the agitation for better conditions, and it is reasonable to believe that progress is being made in the right direction. The high standard of preparation required for supervisors of music in the public schools is having a decided influence on the public-school pupils who study music privately with outside teachers, and this in turn is reflected by the private teacher. The result of various influences is a growing interest in real musical education, as compared with the purely technical training hitherto afforded by many really competent teachers. The study of musical theory is becoming general, musical history is getting some of the recognition it has long deserved, and in occasional instances private teachers are instituting classes in musical appreciation.

To meet this growing feeling of the need for systematic training in topics such as these and to provide a general music education along with specific technical instruction, three large and comprehensive courses for piano students have been placed on the market by as many publishers in recent years. These have had a large sale, despite marked differences of attitude toward such courses on the part of teachers. Many excellent musicians hold that music as an art can not be taught to best advantage by any system which implies its general adaptability to each and every pupil. Others feel that the disadvantages involved are offset by the value of having a definite course before both the pupil and the frequently inexperienced teacher. Too often both teacher and pupil have such a limited view of music that the scope of even an average musical education comes as a revelation, and its disclosure by an ordered course is most desirable. If such courses may be promoted without regrettable commercial entanglement, they may accomplish many desirable results.

Definite figures for the number of persons engaged in music teaching in the United States can not be obtained. The census reports group under one heading both musicians and teachers of music, and even a guess at an appropriate separation would be futile. The total under the census of 1910 was 139,310 (male 54,832, female 84,478); in 1920, 130,265 (male 57,587, female 72,678). Without doubt these figures include all those whose occupation is chiefly music, but it is possible that a great number of persons otherwise engaged and reported are more or less involved with music teaching. It is hardly possible to expect definite statements on this point until some form of registration is a State requirement for every music teacher.

A list of music schools and departments compiled in 1921 by one of the musical papers includes 833 such institutions in the United States. Of these, 403 are music departments of colleges, universities, or other educational organizations, and 40 are connected with State normal schools; 390 are apparently conservatories or institutions in which music teaching is the chief object. The percentage of increase or decrease in the total number of schools during the past biennium is so small as to be negligible; in fact, it might altogether be accounted for by the comparative inaccuracy of lists made at intervals of two years. Apparently but two music schools in the country have had unusual incentives for immediate development during the past two years. One school is assisted by an endowment of several million dollars, which has made possible every material facility for an ideal school. The other school has had much smaller financial endowment, but by virtue of community interest and support it has

grown with more than ordinary strides. A number of music schools, East and West, can report imposing new buildings during the past two years, sometimes acquired by gift or endowment, but more frequently made necessary by increased attendance or the need for better facilities.

Two music schools which have had phenomenal growth in recent months are the Eastman School of Music, connected with the University of Rochester, N. Y., and the Cleveland Institute of Music, of Cleveland, Ohio. For the foundation of the former Mr. George Eastman in 1918 enabled the University of Rochester to acquire the Institute of Musical Art of that city; the next year he contributed \$3,500,000 for a site, building, and endowment, and has since added largely to this contribution to cover the cost of building and equipment. The Eastman School of Music, which is under the direction of Alf Klingenberg, has grown from a student registration of 506 in September, 1921, to 1,622 on March 1, 1923. The Cleveland Institute of Music, which is not affiliated with any other institution, has grown from an attendance of 130 in June, 1921, to 350 in June, 1922. The theory department has now 150 students. Ernest Bloch is the musical director.

NUMBER OF MUSIC SCHOOLS.

*No available list for the past biennium gives complete and detailed information concerning the number of teachers or pupils in music schools and departments during this period, but a comparison of the music school sections in Sargent's American Private Schools for the years 1919-20 and 1921-22 yields some interesting figures, which are probably a safe basis for computation. Forty-three music schools have provided information in each of these annuals, from Boston to San Francisco, and from Detroit to Atlanta. The institutions are chiefly musical, only a small percentage being college or university music departments. Of the 43, only two report a decrease in faculty or students, and the total decrease is 18 for teachers and 164 for students. On the other hand, 41 schools report a total increase of 147 teachers and 10,515 pupils over the figures of 1,277 teachers and 24,558 pupils in 1919-20. In the handbook for 1919-20 were listed 57 music schools, with 1,507 teachers and 28,532 pupils. In the 1921-22 handbook 85 schools are represented, with 2,615 teachers and 46,709 pupils. Despite the fact that these lists include only the schools advertising in the book, and that in occasional instances the number of neither teachers nor students is given, the figures may be taken as representative of general conditions. The schools are in every part of the United States, and of every size, from the smallest to the largest.

The list of 833 music schools mentioned as the most complete of late date necessarily includes a wide variety of concerns advertising as "music schools." As in the case of the private teacher, there is no legal hindrance if one teacher, or two or three teachers, decide to advertise as a music school, conservatory, or even college or university of music. The unfortunate result is that a considerable number of institutions have the loosest sort of organization and the most feeble curriculum imaginable. On the other hand, there are at least a score of music schools in the country of notable size and high artistic aims. One school advertises an enrollment of 4,000 pupils, and several have above 2,000. In many schools, both large and small, the courses are well planned and comprehensive, and the results may well be compared with those of any other educational institutions.

An encouraging feature in the recent progress of music education is the increasing favor with which music credits are regarded, either for entrance or in course, by the colleges and universities. A summary published in 1922 by the Art Publication Society of St. Louis states that, while in 1918 slightly more than one-half of 229 colleges and universities replying to a questionnaire allowed music credits, in 1922 the same inquiries developed the fact that 232 institutions allow entrance credits in music; 264 allow such credits toward the B. A. degree, and 293 allow credits either for entrance or college.

The question of a national conservatory of music still receives attention in certain quarters, and one or more bills in its behalf are usually before Congress. A national institute of music, properly administered and free from both musical entanglements and political bias, would be welcomed by many leading musicians of the country as affording an ideal opportunity for the development of American musicians with marked talent. But as yet the rank and file of music teachers have failed to show any particular concern over the matter, and will probably remain apathetic until some distinctly favorable or unfavorable action forces them into some activity.

Noteworthy progress is being made in the United States in the provision of excellent teaching material. Every field is covered by the composition of vocal and instrumental music, and by editing or compiling educational works equal or superior to the best importations of earlier days. Each year sees important additions to the repertoire of these works, and the great American music publishing firms bring them out in profusion. In the department of musical theory numerous treatises by American musicians show their advance in conformity to modern educational principles, and these works are generally supplanting the translations of foreign and ancient methods formerly regarded as indispensable. At least one history of music by an American author has become a standard

not only in this but also in other English-speaking countries. In the departments of acoustics, musical appreciation, biography, and technical treatises on the voice or specific instruments, American writers have made recent and valuable contributions.

The conclusion, then, is that in the past two years decided progress has been made in the large departments represented by the private teacher or the music school. There is a healthy discontent with certain unsatisfactory conditions, and fair progress toward their remedy. There is evidently a marked increase in the number of persons studying music, the material provided for the students is of improved quality, and teachers are awakening to their responsibilities.

CHAPTER XIX.

RECENT DEVELOPMENTS IN EDUCATIONAL JOURNALISM.

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Recent developments in educational journalism have had to do chiefly with the efforts of professional journals to maintain the publication of scientific and technical material in the face of a high-cost emergency that has not yet wholly passed away; with the creation of new State and national association journals or the re-establishment of older ones on a better business and professional basis as a conspicuous part of the recent noteworthy growth in teacher-organization; and with the strengthening of educational publicity in the columns of the daily newspaper and in other media of general rather than pedagogical appeal.

The technical educational journal has been having a very difficult time and has hardly more than held its own. Educational journalism in the daily newspaper, on the other hand, has maintained itself effectively and has improved in quality; while the new life that has come into the State educational journals in the past two years, to say nothing of the Journal of the National Education Association, indicates a rapidly growing professional sense on the part of American teachers that should sooner or later result in a more secure position for such of the educational journals as are of genuinely national scope and interest and can prove their value.

An accurate and acceptable list of educational journals is made difficult by the lack of a standard definition. There are 144 periodicals reporting to the United States Bureau of Education as the result of a recent inquiry,¹ and the merest glance through the list shows how varied the publications are. Efforts have been made to eliminate the mere news sheets or school and college papers usually found on "educational" lists,² but there is still a sufficient variety to be puzzling.

Perhaps the most striking feature of this list of educational journals is the scarcity of periodicals of really national scope, and the limited circulation of those that there are. Of the 144 journals listed, probably not over 10 can rightfully claim to be independent and national in the sense that they try to deal with educational problems in a national way free of associational connections.³ In the

¹ Information collected by the Bureau of Education in October, 1920; revised by correspondence during 1921 and 1922; and checked by submission of the complete list to all those whose names appeared on it in November, 1922. The statistics as given here and in the accompanying table have been revised to Jan. 1, 1923, so far as information was available.

² See, for example, Ayer's American Newspaper Annual and Directory (N. W. Ayer & Son, Philadelphia).

³ Exclusive, of course, of journals like Normal Instructor and Primary Plans (reported circulation, 155,000), which aim chiefly to present content material and schoolroom devices for teachers.

case of at least four of these, circulation figures are not available even in the form of publishers' estimates. Only 2 of the journals meet the first test of honest journalism by reporting audit bureau or detailed figures. The aggregate circulation of all 10, if we accept publishers' claims for 6 of them and make the most liberal possible estimates for the others, is considerably less than 40,000.

The one in this group of journals reporting the highest figure (10,855) is intended for a special nonprofessional clientele—members of boards of education—so that the typical educational journal of the sort our libraries and professional educational workers must chiefly depend upon is an affair of around 3,000 circulation. It is hardly surprising, in the circumstances, that the mortality among school journals is high; barely one-fourth of the journals now publishing antedate the twentieth century, while in the two years under review 10 educational periodicals have passed out of existence and 17 new ones have been established.

The plight in which the scientific educational journals find themselves is still substantially that described by Dr. B. R. Buckingham in a communication to the Commissioner of Education at the outset of the present inquiry:

The type of material in which the editors of journals of educational research are particularly interested has been seemingly more profoundly affected than have other types of material. I refer to articles reporting the results and application of investigation. These articles not infrequently involve considerable tabular and graphic display. On account of the unusual expense incident to this kind of printing, the output of research material has been restricted. I happen to know that the result of this has been the suppression of many valuable articles.

It is our own opinion that educational journalism of the better sort will not assume the importance and influence which it should until each publication is sufficiently endowed to take care of all financial difficulties, or until readers of educational material are sufficiently numerous to support educational journalism as a commercial venture.

The situation is somewhat better with the larger group of periodicals that deal nationally with some special field than it is with the general publications just referred to. There are 38 of the special type ranging in circulation from a few hundred to 17,000. This group include a number of the most significant journals, such as the Elementary School Journal and the School Review, published by the University of Chicago; the American Physical Education Review; the Journal of Rural Education; the Journal of Educational Psychology; the Industrial Arts Magazine, and Industrial Education Magazine; Religious Education; and the recently established Vocational Education Magazine and the Educational Screen.

STATE EDUCATIONAL JOURNALS.

It is in the State and associational group of periodicals that real circulation is apparent. The growth of the Journal of the National Education Association, which in less than two years has attained a circulation of 130,000, is paralleled by many of the State journals,

some of them organs of the State teachers' associations, a few others jealously retaining their independence. The aggregate circulation of this group of 48 periodicals is 234,800, which is much closer to what might normally be expected than is the circulation of the supposedly national journals of educational thought and opinion. In at least one State (Pennsylvania) the close relation between the State school journal and the State association membership has carried the circulation to well over 48,000. It will be said, of course, that in the case of many of the State journals there is a padding of the subscription lists through the fact that all members are automatically subscribers, a part of the annual dues being set aside for subscription to the official journal. These are, however, bona fide subscriptions to an extent not usually the case with membership subscriptions, since one of the chief inducements generally held out for membership in the State educational association is that it carries with it the State journal. Furthermore, it is evident from an examination of the form as well as the content of these newer State journals that full-time, responsible editorship has taken the place of the voluntary and usually inefficient service of other days, so that the readers are probably a part of the journal in a way in which they seldom were before the change.

These State journals frequently include in their clientele more than the organized teachers of the State. Thus the Arkansas Educational Association announces a new publication, to be known as the Journal of Arkansas Education, which represents a combination of the Arkansas Teacher, recently acquired, the quarterly journal hitherto issued by the association, and the monthly Educational News Bulletin of the State Department of Public Instruction. The new journal, the announcement states, "will not be strictly a method or professional magazine, but a newspaper devoted to education in Arkansas." It will be the organ, not only of the Arkansas Educational Association, but of the Forward Education Movement as well, and will carry official announcements from the State Department of Public Instruction. Of special interest is a department of school directors, edited by a newspaper publisher who happens to be at the same time a member of one of the county boards of education.

The general purposes of the association journals are well expressed in the following editorial announcement of one of the newest and best of them, the Washington Educational Journal:

1. To include in our perspective all the educational forces of the State, both institutionally and departmentally.
2. To spread information concerning educational progress and problems.
3. To cultivate professional spirit and sense of professional solidarity throughout the State.
4. To stimulate individual and cooperative effort to raise educational standards and promote educational efficiency.

Quoted with approval by President S. E. Davis, of the State Normal College, Dillon, Mont., in a significant article in the Inter-Mountain Educator.

5. To advise the Washington Educational Association membership of the plans and activities of their officary.
6. To gather from the membership their opinions and convictions on matters of educational policy.
7. To supply material for the use of teachers in educating the public for the betterment of their schools.
8. To enlarge the individual acquaintance and to extend the personal contact of teachers in the State.
9. To acquaint teachers with educational progress in other States, and in the Nation at large.
10. To offer an incentive to original and constructive contribution to professional knowledge and insight.

Naturally the rapid growth of these State association journals has not been accomplished without difficulties. Here and there differences of opinion have developed as to how far the State journal should be officially connected with the teachers' association on the one hand and the State superintendent's office on the other. There have been times when the privately owned educational journal of the State looked somewhat askance at the entrance of the association into the journalistic field. As the editor of one of the independent State journals in the Middle West wrote to the Bureau of Education:

There seems of late in certain sections of the country to be a tendency toward the State teachers' associations owning and publishing their own organs. As these official organs are, as it seems, also business enterprises, seeking general as well as educational advertising, they will of course affect both the business as well as the service of those educational periodicals which must depend entirely upon private enterprise.

This editor makes it clear, however, that as far as his journal is concerned the effect will simply be to cause him to "enlarge the general scope of service" of the magazine, to take in other groups interested in education besides the teachers themselves.

There have also been signs, in the two years just passed, of jealousy on the part of the State journals, both associational and private, of the enormous growth and prosperity of the Journal of the National Education Association. Sentiment as expressed in recent meetings of the Educational Press Association and elsewhere, however, has been wholly favorable to both the State and National association periodical development, the feeling apparently being that there is ample room for all the different types, and that on the advertising side in particular none of the journals has begun to exhaust the possibilities. This sentiment has undoubtedly been helped along by the attitude of the National Education Association, which has taken care to show its interest in the work of the newly created full-time secretaries, leading in movements for cooperation on the part of all the journals in professional and business matters alike and in general aiding materially in putting State educational journalism on a sound basis. The journal itself summed up the situation recently on its editorial page as follows:

There are the following well-defined fields in educational journalism which may be expected to grow in importance: (1) The local educational newspaper, published

either by the board of education or by a local education association and serving as a mirror of the educational enthusiasms and standards of the community; (2) the State educational journal, published either by private enterprise or by the State association and reflecting the news, special interests, programs and enthusiasms of the educational leaders of the State; (3) journals of general appeal and national in scope which reflect the initiative and creative energy of independent educational leaders; (4) journals dealing with special phases of the science of education; (5) journals appealing to groups working in special fields or levels of the educational service.

There is enough educational thought in America to fill all such journals which now exist, to improve them still further, and even to establish others. There is enough potential educational advertising to support much larger enterprises in educational journalism than have yet been undertaken. Let any journal set for itself a well-defined field of needed usefulness, maintain high and consistent editorial standards, insist on being printed attractively, and make a virile campaign for advertising and success is almost certain. The National Education Association, with its broad interest in the improvement of education, regards it as its duty to encourage the development of every worthy educational journal.⁵

NEWSPAPERS AND EDUCATION.

Of no less importance in educational journalism than the development of the association journals, in the past two or three years, is the increased attention to education in periodicals intended for the general public—notably the daily newspaper—and the corresponding interest on the part of the schools in carrying their message through all the available agencies of the hour, from the daily press to motion pictures and radio.

The most obvious, though not the most important, measure of newspaper interest in education is the daily or weekly school page or department. Some 20 of the 200 or more chief daily newspapers in the United States maintain a school or education page under the direction of an "educational editor" or other staff employee specially equipped for his task.⁶ The list includes such newspapers as the Boston Transcript, the New York Globe, the New York Mail, the New York Evening Post,⁷ the Brooklyn Daily Eagle, the Christian Science Monitor, the Jewish Morning Journal (New York), the Spokane Daily Chronicle, the Baltimore Sun, the Providence Journal, the Seattle Times, the Portland Journal, the Buffalo News, the New Orleans Times-Picayune, the Louisville Times, the Louisville Post, the Washington Times, the Los Angeles Examiner, and the Cleveland Press.⁸

The tradition of anonymity that still persists in most newspaper offices makes it difficult to give adequate credit to the men and women who have pioneered in this field. It is impossible not to mention, however, Henry T. Claus, school and college editor of the Boston Transcript, to whom every newspaper writer on education is heavily indebted; Tristram W. Metcalfe, of the New York Globe, creator of the daily school page of the metropolitan type; Jacob Jacowitz, editor of the school page of the New York Mail; and Florence Maph, of the Seattle Times.

⁵ Journal of the National Education Association, xl: 196, May, 1922.

⁶ Dr. Reynolds's study gives statistics based on size of city.

⁷ Discontinued July, 1922.

⁸ Since early in 1923.

It is not detracting from the work of any of these to say that the present tendency in newspaper treatment of education is apparently away from the school page. There has always been considerable difference of opinion among newspaper people and others interested in educational journalism of the daily-press type as to the merits of the special page or department. Many newspapers have given up the department idea, not only for education but for most other subjects. In the case of education the argument is that the separate page or department means that the readers will mainly be those already interested in education,* whereas the chief value of newspaper treatment of education is that the schools may thereby be better known to large masses of the public. Sincere believers in education and in the value of educational material in the press assert that education should be handled strictly on its merits, in competition with other news and features. Thus the New York Times does not have a school page, though it has on its staff one of the most distinguished men in educational journalism—Dr. John H. Finley, former commissioner of education of New York State—and probably carries more material about education than any other publication. Similarly the Newark Evening News, while it has no separate page for education, gives the most discriminating editorial treatment to education and has for years been represented at educational conventions and elsewhere in school work by one of the best equipped of the newspaper writers on education.

There is possibly more argument for the separate school page where the education page is a weekly feature, along with other weekly features, yet even here the decision seems to be that on the whole education is better off if not given a special place, but "used according to the news value of the day," as Eric Sanxille, of the Philadelphia Public Ledger, puts it. What is apparently most objected to is the too obvious education label. Just as "educational" motion pictures are likely to be those that have no entertainment value, so there is a feeling that to label a thing "education" in the daily newspaper makes it lose in attractiveness. As Avery C. Marks, jr., says:

The experience of newspaper editors is, I believe, to the general effect that the newspaper-reading public does not object to being "educated" or instructed, but it thoroughly objects to being informed of the fact that it is being instructed. The average reader will swallow a large educational pill if there is sufficient chocolate coating of human interest on it.

Some of the newspapers that do not have education pages or departments, but express special interest in education material, are the Johnstown (Pa.) Tribune, the Milwaukee Journal, the Houston Chronicle, the Syracuse Herald, the Los Angeles Herald, the Atlanta

* This is particularly true where, as in the case of the two New York papers, the school news appears only in the home edition, which has a very limited sale and is purchased chiefly by the special school clientele.

Georgian, and the Rochester Times-Union. The latter paper remarks:

Although we have no education department or page, we are glad to use anything of interest on the subject and will do all we can to promote educational work and stimulate interest.

The attitude of a modern newspaper toward education material is well described in the following statement by Henry T. Claus, of the Boston Transcript, covering the experience of his paper since the creation of a school and college department more than a quarter of a century ago:

The Transcript's school and college department was inaugurated in 1895, but its greatest development, which includes the organization of a staff of correspondents in schools and colleges in all parts of the country, the building up of a reference library, and a close study of American and foreign educational journals and American school and college newspapers and magazines, has come within the past 15 years. To-day the Transcript aims to describe fully and appraise accurately the large educational developments of the day, to record the important affairs of all universities, colleges, and schools, and to chronicle the daily happenings at those institutions in which Transcript readers are primarily interested.

In carrying out this purpose the Transcript devotes anywhere from three to five columns a day to educational news, utilizes the services of the Associated Press and its own correspondents and special writers, and the publicity copy sent out by the Federal Bureau of Education and educational institutions and organizations. A great deal of this so-called publicity copy is helpful; particularly valuable has been that designed to awaken the public to an appreciation of the fact that the small salaries paid public-school teachers constituted a national menace. That the campaign for higher salaries was successful was due in no small measure to the forceful arguments and striking facts contained in the press material spread broadcast by the Federal bureau and by organizations of teachers and others actively interested in education.

On the other hand, some of the copy is, so far as the Transcript is concerned, of little use. It has not the popular appeal which the newspaper strives to find in every prospective news item. It interests only one class of readers; as such it belongs not in a newspaper, but in a publication which is primarily designed for that particular class of reader. But it is only fair to state that the amount of nonusable copy which comes into newspaper offices is growing proportionately smaller with each passing year. A knowledge of what newspapers want and do not want is apparently becoming more general. In particular has the efficiency of college publicity been increased, a circumstance due partly to the fact that many institutions through their schools of journalism have made a study of the newspaper and partly to the fact that experienced newspaper men are gradually supplanting members of the faculty as college press agents.

There is evidence to-day of a growing willingness on the part of private and public school authorities to cooperate with the newspapers. It is much easier than it used to be for a newspaper man to get facts from colleges and schools, and educational authorities generally appear to have reached the conclusion that there is nothing to be gained by withholding a story in which a considerable portion of the public has a vital concern.

EDUCATIONAL INFORMATION SERVICE.

It is clear; not only from this statement of Mr. Claus, but from the evidence everywhere at hand in the daily press, that with the increased attention to educational news has gone an increased effort

on the part of schools and educational institutions everywhere to make the material they have available to the public. Educational publicity, or better, "educational information service," has developed notably in the past year or two, and what was once regarded as a more or less dangerous and unholy enterprise—that of interpreting educational institutions to the world outside—has become a reasonably respectable calling in which there are still hazards but by which reputations may be won and service may unquestionably be rendered. There are few State departments of education that do not have their own press bulletins or special places in the State school journals; nearly all colleges are supplied with someone whose business it is to furnish material about the institution to the press,¹⁰ though the material varies tremendously in value and sincerity; and even the educational foundations have had come to the point of providing carefully prepared press statements of their more formal studies and reports.

More important than the extent of the publicity wave is the change of emphasis that appears to have come. The word "publicity" is more and more being avoided, not for shame, but because of a recognition that educational institutions are not interested in "publicity" so much as in providing the channels of "information," whereby the outside public may learn through agents of its own choosing just what the truth is. It is significant that in the better university information bureaus no press letter is allowed to go out wherein the institution is "boosted" or where praise of the institution is sought. The better publication bureaus "issue" comparatively little, but have a wide open door for all—representatives of the press especially—who wish to find out. "Press-agenting" is the last thing the more responsible information person on a modern college staff is after. What Frederic Allen has been doing for Harvard University in the past three years is typical of what may be expected when universities have their relations with the outside world on a better basis as far as the press is concerned. There was nothing spectacular or boastful about the material issued by the Harvard publications office under Allen; it was nearly always interesting, dignified, and important, with the result that even the most hardened city editor, carefully steeling himself against publicity material in general, would find himself using it for the simple reason that it was good as news—the kind of thing he would expect his own staff to run down if time and energy allowed.

Not all educational institutions can at present reach the Harvard standard as set by Mr. Allen, but some of them are doing it. One of the very best of the public-school information offices is that maintained by the public schools of Cleveland, Ohio, where Clyde R.

¹⁰ Mr. Cravens's study (see below) shows that half of the institutions then reporting had "publicity persons."

Miller is director of the division of publications, and where the same high sense of duty to the schools, the press, and the public prevails as at Harvard. The division publishes a city school paper, *School Topics*, which is one of the best of its kind, but this paper is intended primarily for the teachers of the system. In its relations with the press of the city the division seeks to give every newspaper representative in Cleveland the best possible opportunity for finding out all he wishes to about the schools. Recently, for example, the division made arrangements so that a particularly well-equipped newspaper man—Mr. Fred Charles, of the *Plain Dealer*—was enabled to go through the schools of the city, sitting each day in a classroom with other pupils just as he did when a boy, to write for the readers of his paper a day-by-day first-hand account of going to school in all the grades. The ideals of the Cleveland division of publications are set forth as follows by Mr. Miller:

The division of publications is attempting to create in the system an atmosphere of frankness, of absolute openness, in dealing with the public and particularly with the press. There should be no secrets in the operation and conduct of the schools.

Everything in the schools should be open for public inspection. The schools and their officials and employees should not resent just criticism, and even unjust criticism affords no good reason for a policy of secrecy. Some of the newspapers of the city have been of great service in interpreting the schools to the public. Occasional garbled, half-true, or intentionally mischievous newspaper stories, while causing just indignation or regret on the part of school employees or officials, offer no sound basis for closing the door in the face of newspaper representatives.

The division of publications is trying to train officials, principals, and teachers in intelligent cooperation with the press. To a limited extent the office of the division in the school headquarters building is itself a clearing house of news. But in its contact with the newspapers it scrupulously avoids any action or attitude that might suggest "press-agenting" or censorship. It simply endeavors to make it as easy and convenient as possible for the papers to get the news about the schools.

It has been mentioned that the Cleveland division of publications publishes a journal called *School Topics*. The journal was begun in 1920. It is attractively printed, well illustrated, and especially interesting in content and method of presentation. While distributed primarily to teachers, it has an influence much beyond the teacher group in Cleveland. Some of the cities that have started school magazines are Columbus and Akron (Ohio), Harrisburg (Pa.), Detroit, Denver, Buffalo, Baltimore, Pittsburgh, Duluth, Oakland (Calif.), and Pueblo. They may all be regarded as symptomatic of the widespread movement to make educational material more available than hitherto, and they have had a considerable part already in enabling the newspapers to get by easy stages back to the information they need if they are to interpret the schools to the community.

Other examples of the same effort are to be found in such publications as *School Life*, issued by the United States Bureau of Education; the shorter bulletins, leaflets, and broadsides of the bureau and other Government agencies; and the more or less popular bulletins issued by the National Education Association, particularly

since the establishment in the association of the division of research in 1922.

STUDIES OF PUBLICITY.

One indication of the growing importance of educational publicity or information service as a type of educational journalism is that it has been the subject of special investigation during the period under review. Besides a number of periodical articles on the subject, there have been at least two important longer studies, one of which was considered sufficiently comprehensive to be accepted as a doctor's thesis at Teachers College, Columbia University. The two studies referred to are: "Educational publicity," by John W. Cravens, secretary and registrar of Indiana University,¹¹ and "Newspaper publicity for the public schools," by Dr. Rollo G. Reynolds, of Teachers College.

Mr. Cravens's study, which was based on returns from "more than 300 leading colleges and universities of the United States," discussed the arguments for and against college and university publicity; emphasized the need for more systematic publicity methods, and especially the responsible character of the work to be done.

In Doctor Reynolds's study the motive was to investigate statistically the use of the daily newspaper as a "means of informing the public about the public schools." The investigation covered the reading, analyzing, and classifying of 1,800 newspapers in 25 different States, and the various sections of the report deal, respectively, with: The amount and character of school news found in the daily newspaper; school news from the editor's viewpoint; school news from the superintendent's viewpoint; school news from the newspaper reader's viewpoint; and a program for school information service in the daily newspaper. The report is valuable alike for the newspaper seeking ideas for education material and for school officials desirous of finding what current practice is in typical American cities in the handling of school news. An unusual feature is the series of full-page reproductions of actual newspaper "layouts" for educational material. Some of the more significant conclusions are as follows:

The local public-school system is an important source of news found in the daily press.

In general, the newspaper staff believes in presenting constructive and informational news in regard to the public school. The proportion of school news, sensational or destructive, which is found in the daily newspaper, is extremely small.

School systems are cooperating to some extent with newspapers in the collection of school news.

A large amount of school news is being collected by newspapers independently of the school organization.

School pages and school columns are not common types of school news.

School news should not in general be placed in departments. It should take "the run of the paper" and compete with other news for position.

¹¹ Indiana University Bulletin, xx: No. 9, June 15, 1922.

In general, school-people have not learned the technique of newspaper writing. They do not recognize the elements which make for news interest. Their writing style is not suited to the newspaper. They do not know how to prepare copy properly. They do not collect news systematically nor deliver it promptly.

The person responsible for preparing school news for the daily newspaper should adopt a friendly, cooperative, working basis with the newspaper organization.

Newspaper editors in general are without question interested in school news. They are sympathetic toward public-school systems. They are willing to meet the school people more than half way in putting before the public information relative to the public schools.

Most school systems have effected no organization for educational publicity.

Few systems in their annual budgets provide for school publicity, and on the whole little money is spent for this purpose.

A list of educational periodicals.

Name.	Place of publication.	Frequency of issue.	Year established.	Circulation.	Editor.
Alabama School Journal.	Birmingham, Ala.	Monthly ¹	1882	10,530	H. G. Dowling.
Alaska School Bulletin.	Juneau, Alaska.	do. ²	1918	600	L. D. Henderson.
American Education.	Albany, N. Y.	do. ¹	1897	1,500	C. W. Blessing.
American Educational Digest.	Lincoln, Nebr.	do. ¹	1923		Frank E. Weld and J. W. Searson.
American Federation of Teachers' Semi-Monthly Bulletin.	Chicago, Ill.	Semimonthly.	1921	6,500	Charles B. Stillman and F. G. Stecker.
American Penman.	New York, N. Y.	Monthly.	1884	17,000	A. N. Palmer.
American Physical Education Review.	Springfield, Mass.	do.	1896	2,800	J. H. McCurdy.
American School.	Milwaukee, Wis.	do.	1915	1,500	C. G. Pearse.
American School Board Journal.	do.	do.	1891	10,855	W. G. Bruce.
American Schoolmaster.	Ypsilanti, Mich.	do. ¹	1908	1,100	T. W. H. Irion.
Arizona Teacher.	Phoenix, Ariz.	do. ¹	1914	1,000	C. Louise Boehringer, Yuma, Ariz.
Boston Teachers' News Letter.	Boston, Mass.	do. ¹	1912	1,400	Anne Alfreda Mellish.
Bulletin of the American Association of University Professors.	Cambridge, Mass.	do. ¹	1914	4,500	H. W. Tyler.
Bulletin of the Department of Elementary School Principals.	Washington, D. C.	do.	1922	3,000	W. T. Longshore.
Bulletin of High Points in the Work of the High Schools of New York City.	New York, N. Y.	do. ¹	1920	3,500	Lawrence A. Wilkins.
Bulletin of the High School Teachers' Association.	Washington, D. C.	Yearly ³	1906	300	Stoyl Baker.
Bulletin of the Illinois Association of English Teachers.	Urbana, Ill.	Monthly ⁴	1907	2,000	H. G. Paul.
Business Educator.	Columbus, Ohio.	do.	1895	9,200	Arthur G. Skeeles.
Catholic Educational Review.	Washington, D. C.	do. ¹	1911		P. J. McCormick and G. Johnson.
Catholic School Interests.	Oak Park, Ill.	do.	1922		L. F. Happel.
Catholic School Journal.	Milwaukee, Wis.	do. ¹	1901	10,000	Mary J. Desmond.
Chicago Schools Journal.	Chicago, Ill.	do. ¹	1917		William B. Owen.
Child Welfare Magazine.	Philadelphia, Pa.	do.	1906	5,000	Mrs. Frederic Schoff, Mrs. Elizabeth Harris, and Mrs. J. P. Mumford.
Christian Education.	New York, N. Y.	do. ¹	1916		Robert L. Kelly.
Christian Education Magazine.	Nashville, Tenn.	Bimonthly.			Board of education Methodist Episcopal Church South.
Christian Student.	New York, N. Y.	Quarterly.	1900	28,000	Abram W. Harris.

¹ Except July and August.

² Except June, July, and August.

³ Also monthly informal issues.

⁴ October to May.

A list of educational periodicals—Continued.

Name.	Place of publication.	Frequency of issue.	Year established.	Circulation.	Editor.
Church School ¹	New York, N. Y.	Monthly.....	1919	15,000	Henry H. Meyers, Sidney A. Weston, and E. B. Chappell.
Classical Journal.....	Cedar Rapids, Iowa.	.....do. ²	1905	.....	F. J. Miller and A. T. Walker.
Classical Weekly.....	New York City, 1737 Sedgwick Ave.	Weekly, Oct. 1 to May 31.	1907	1,600	Charles Knapp.
Colorado School Journal.....	Denver, Colo.	Monthly ¹	1885	6,700	H. B. Smith.
Community Center.....	New York, N. Y.	Bimonthly.....	1917	.....	LeRoy E. Bowman.
Connecticut Schools.....	Hartford, Conn.	Monthly.....	1920	13,000	A. B. Meredith and Helena F. Miller.
Detroit Educational Bulletin.....	Detroit, Mich.	.....do. ¹.....	.....	.....	Arthur B. Moehlman.
Detroit Educational Bulletin, Research Numbers.....	.....do.....	2 to 4 numbers annually.	.....	.....	Do.
Detroit Journal of Education.....	.....do.....	Monthly ¹.....	.....	.....	C. C. Certain.
Education.....	Boston, Mass.	.....do.....	.....	.....	F. H. Palmer.
Educational Administration and Supervision.....	Baltimore, Md.	.....do. ²	1915	.....	William Chandler Bagley, Verrett Wallace Charters, Lotus D. Coffman, Alexander Inglis, David Snodden, and George Drayton Strayer.
Education Exchange.....	Birmingham, Ala.	.....do. ¹	1885	2,000	Elmer Everett Smith.
Educational Issues.....	Columbus, Ohio.	.....do.....	1920	.....	J. J. Pettijohn, Ohio State University.
Educational Record.....	Washington, D. C.	Quarterly.....	1920	1,700	C. R. Mann.
Educational Review.....	Garden City, N. Y.	Monthly ¹	1891	3,012	F. P. Graves.
Educational Screen.....	Chicago, Ill.	.....do. ¹	1922	4,000	Nelson L. Greene.
Educator-Journal.....	Indianapolis, Ind.	.....do.....	1858	4,000	L. N. Himes and M. P. Helm.
Elementary School Journal.....	Chicago, Ill.	.....do. ¹	1899	5,312	University of Chicago department of education.
English Journal.....	.....do.....	.....do. ¹	1912	6,000	W. Wilbur Hatfield.
General Science Quarterly.....	Salem, Mass.	Quarterly.....	1916	700	W. B. Whitman.
Hawaii Educational Review.....	Honolulu, Hawaii.	Monthly ¹	1911	1,900	Department of education Territorial Normal School.
High School Journal.....	Chapel Hill, N. C.	.....do. ¹	1918	.....	N. W. Walker.
High School Quarterly.....	Athens, Ga.	Quarterly.....	1912	.....	Joseph S. Stewart.
Historical Outlook.....	Philadelphia, Pa.	Monthly.....	1909	5,200	Albert E. McKinley.
Home and School.....	Washington, D. C.	.....do.....	1909	.....	Warren E. Howell.
Home and School Guest.....	Stroudsburg, Pa.	Quarterly.....	1910	1,250	Frank Koehler.
Idaho Rural Teachers Monitor.....	Lewiston, Idaho.	Monthly.....	1914	3,000	Lewiston Normal School.
Idaho Teacher.....	Boise, Idaho.	.....do. ¹	1918	.....	H. E. Fowler, Lewiston, Idaho.
Illinois Teacher.....	Bloomington, Ill.	.....do. ¹	1910	18,000	Robert C. Moore.
Industrial Arts Magazine.....	Milwaukee, Wis.	.....do.....	1914	6,215	E. J. Lake and S. J. Vaughn.
Industrial Education Magazine.....	Peoria, Ill.	.....do.....	1899	5,700	C. A. Bennett and W. T. Bawden.
Inter-Mountain Educator.....	Missoula, Mont.	.....do. ¹	1905	4,800	Morton J. Elrod.
Journal of Education.....	Boston, Mass.	Weekly.....	1875	.....	A. E. Winship.
Journal of Educational Method.....	Yonkers, N. Y.	Monthly ¹	1921	3,500	James F. Hsieh, Teachers' College, New York City.
Journal of Educational Psychology.....	Baltimore, Md.	.....do. ²	1910	.....	J. Carleton Ball.
Journal of Educational Research.....	Bloomington, Ill.	.....do. ¹	1920	1,561	B. R. Buckingham.
Journal of Geography.....	Chicago, Ill., 2249 Calumet Ave.	.....do. ¹	1897	3,400	George J. Miller, State Teachers' College, Mankato, Minn.
Journal of Home Economics.....	Baltimore, Md.	.....do.....	1909	8,000	Mrs. Alice P. Norton.

¹ Except July and August.² Except June, July, and August.³ October to May.⁴ "Issued in 3 editions: Berea edition for M. E. denomination; Pilgrim edition for Congregationalists; Standard edition for M. E. South."⁵ Except July, August, and September.

A list of educational periodicals—Continued.

Name.	Place of publication.	Frequency of issue.	Year established.	Circulation.	Editor.
Journal of Rural Education.	New York, N. Y.	Monthly	1921	.....	Fannie W. Dunn.
Journal of the National Education Association	Washington, D. C.	.....do. ¹	1921	130,000	Joy Elmer Morgan.
Journal of the New York State Teachers' Association.	Rochester, N. Y.	.....do. ²	1914	10,000	Herbert S. Weet, George B. Bristoe, Alfred C. Thompson, and Richard A. Searing.
Junior Red Cross News.	Washington, D. C.	.....do. ³	1919	125,000	Austin Cunningham.
Kansas Teacher and Western School Journal.	Topeka, Kans.	.....do.	1914	13,500	F. L. Pinet.
Kentucky High School Quarterly.	Lexington, Ky.	Quarterly	1915	850	J. P. C. Noe.
Los Angeles School Journal.	Los Angeles, Calif.	Weekly	1917	2,800	Earl E. Hitchcock.
Journal of Arkansas Education.	Little Rock, Ark.	Monthly	1923	6,500	E. B. Tucker.
Mathematics Teacher.	Lancaster, Pa.	Quarterly	1907	1,700	J. R. Clark, Lincoln School, New York City.
Middle-West School Review.	Omaha, Nebr.	Monthly .....	.....	.....	R. W. Eaton.
Midland Schools.	Des Moines, Iowa.	.....do. ¹	1885	16,789	Charles F. Pye.
Missouri School Journal.	Jefferson City, Mo.	.....do. ¹	1883	3,000	Albert S. Lehr.
Moderator-Topics.	Lansing, Mich.	Weekly	1880	5,000	John M. Munson.
Modern Language Journal.	Philadelphia, Pa.	Monthly	1915	2,950	J. P. W. Crawford.
Nature Study Review.	Ithaca, N. Y.	.....do. ³	1905	2,000	Mrs. Anna Botsford Comstock.
Nebraska Educational Journal.	Lincoln, Nebr.	.....do. ³	1922	11,000	Everett M. Hosman.
Nevada Educational Bulletin.	Carson City, Nev.	.....do. ³	1919	1,300	W. J. Hunting.
New Mexico School Review.	Albuquerque, N. Mex.	.....do. ....	.....	.....	John Milne.
Newark School Bulletin.	Newark, N. J.	.....do. ¹ .....	.....	.....	.....
Normal Instructor-Primary Plans.	Dansville, N. Y.	.....do. ¹	1891	155,000	W. J. Beecher, Mrs. Elizabeth P. Bemis, Helen M. Owen, and Mary E. Owen.
North Carolina Education.	Raleigh, N. C.	.....do. ¹	1906	3,032	W. F. Marshall and E. C. Brooks.
Ohio Educational Monthly.	Columbus, Ohio.	.....do.	1852	.....	J. L. Clifton.
Ohio History Teachers Journal.	Columbus, Ohio (Ohio State University).	Quarterly	1913	225	Edgar H. McNeal.
Ohio Teacher.	Columbus, Ohio.	Monthly .....	.....	.....	O. T. Corson.
Oklahoma School Herald.	Tulsa, Okla.	.....do. ¹ .....	.....	2,000	E. G. Aston.
Oklahoma Teacher.	Oklahoma City, Okla.	.....do. ²	1919	15,000	M. R. Floyd.
Pedagogical Seminary.	Worcester, Mass.	Quarterly .....	.....	.....	G. Stanley Hall.
Pennsylvania School Journal.	Harrisburg, Pa.	Monthly	1852	48,500	James Herbert Kelley.
Philippine Education.	Manila, P. I.	.....do. ¹	1904	8,000	Verne E. Miller.
Physical Training.	New York, N. Y.	.....do.	1901	700	Martin I. F.
Pittsburgh School Bulletin.	Pittsburgh, Pa.	.....do. ¹	1906	2,800	Annabelle McConnell.
Playground.	Cooperstown, N. Y.	.....do.	1907	5,000	H. S. Braucher.
Porto Rico School Review.	San Juan, P. R.	.....do.	1917	3,200	Carey Hickle.
Primary Education.	Boston, Mass.	.....do. ¹	1892	.....	Educational Pub. Co.
Progressive Teacher.	Morrison, Tenn.	.....do.	1893	17,500	Sam Y. Adcock.
Quarterly Journal of Speech Education.	Menasha, Wis.	Quarterly	1915	800	J. M. O'Neill.
Religious Education.	Chicago, Ill.	Bimonthly	1903	3,700	Henry F. Cope.
School and Community.	Columbia, Mo.	Monthly	1915	18,000	Thomas J. Walker.
School and Home.	Atlanta, Ga.	.....do.	1908	2,150	Wilber Colvin.
School and Home Education.	Bloomington, Ill.	.....do. ¹	1881	1,821	George M. Brown.
School and Society.	Garrison, N. Y.	Weekly	1915	.....	J. McKeen Cattell, W. Carson Ryan, Jr., and Raymond Walters.
School Century.	Oak Park, Ill.	Monthly	1905	.....	George W. Jones.

¹ Except July and August.² Except June, July, August.³ October to May.⁴ Except July, August, and September.

A list of educational periodicals—Continued.

Name.	Place of publication.	Frequency of issue.	Year established.	Circulation.	Edition.
School Hygiene Review	Worcester, Mass.	Quarterly	1917	250	Lawrence A. Averill.
School Index	Cincinnati, Ohio	Weekly during school year.	1913		Harry L. Senger.
School Life	Washington, D. C.	Monthly ¹	1918	\$ 22,478	James C. Boykin and Sarah L. Doran.
School Magazine	Buffalo, N. Y.				
School Music	Keokuk, Iowa	Bimonthly	1900	1,800	P. C. Hayden.
School News	Newark, N. J.	Monthly ¹	1910		Samuel B. Howe.
School News and Practical Educator.	Taylorville, Ill.	do. ¹	1887		H. K. Parker.
School Review	University of Chicago, Ill.	do. ¹	1892	3,730	Department of education, University of Chicago.
School Topics	Board of education, Cleveland, Ohio.	Biweekly	1919	7,100	C. R. Miller.
School Science and Mathematics.	Mouflet Morris, Ill.	Monthly ²	1901	3,500	Chas. A. Smith.
School World	Farmington, Me.	do. ¹	1881	1,500	H. L. Goodwin.
Schools and People	Minneapolis, Minn.	do. ²	1919	2,000	E. D. MacDougall.
Sierra Educational News.	San Francisco, Calif.	do.	1904	17,500	Arthur H. Chamberlain.
South Carolina Education.	Columbia, S. C.	do. ¹	1919	450	Patterson Wardlaw.
South Dakota Educator.	Mitchell, S. Dak.	do. ¹	1886		F. L. Ransom.
Southern School Journal.	Lexington, Ky.	do.	1890	2,500	O. S. Deming.
Southern Workman	Hampton Institute, Virginia.	do.	1872	5,700	James E. Gregg, Jane E. Davis, William Anthony Avery, and W. T. B. Williams.
Sunday School Journal.	Cincinnati, Ohio	do.	1868	130,000	Henry H. Meyer.
Teachers College Record.	New York City, 525 West One hundred and twentieth Street.	5 times a year.	1900	5,000	James E. Russell.
Teachers' Journal.	New Haven, Conn.				
Teacher's Monographs.	New York, N. Y.	Quarterly	1894		Edward J. McDonnell.
Teaching	Kansas State Normal School, Emporia, Kans.	Monthly	1914	5,000	Sidney M. Fuerst.
Texas Outlook	Fort Worth, Tex.	do.	1917	17,000	L. H. Hagen.
Texas School Journal.	Dallas, Tex.	do.	1883	15,600	R. T. Ellis.
Training School Bulletin.	Vineland, N. J.	do.	1902	1,000	H. T. Musselman.
Ungraded	New York City, 500 Park Avenue.	do.	1915	800	E. R. Johnstone, Helen F. Hill, S. D. Portus, and Mrs. Alice Nash.
Utah Educational Review.	Salt Lake City, Utah	do. ¹	1907	5,000	Elizabeth E. Farrell.
Virginia Journal of Education.	Richmond, Va.	do. ¹	1907	6,000	Hazel B. Stevens.
Virginia Teacher	Harrisonburg, Va.	do.	1920		J. A. C. Chandler and W. C. Blakey.
Visual Education	Chicago, Ill.	do. ¹	1920		James C. Johnston.
Vocational Education Magazine.	Philadelphia, Pa.	do. ¹	1922		L. M. Belfield.
Vocationist	Oswego, N. Y.	Quarterly	1911	500	David Snedden.
Volta Review	Washington, D. C., The Volta Bureau.	Monthly ²	1900	2,500	J. C. Park.
Washington Education Journal.	Seattle, Wash.	do.	1921		Josephine B. Timberlake.
West Virginia School Journal and Educator.	Charleston, W. Va.	do.	1871		Arthur L. Marsh.
Western Journal of Education.	San Francisco, Calif.	do.	1895	4,000	Geo. W. Jenkins, Jr.
Wisconsin Journal of Education.	Madison, Wis.	do. ¹	1886	3,000	Harr Wagner.
Wyoming Educational Bulletin.	Cheyenne, Wyo.	do.	1919	4,000	Willard N. Parker.
					State department of education.

¹ Except July and August.² Except June, July and August.³ October to May.⁴ Except June and August.⁵ March, 1922.

CHAPTER XX.

THE AMERICAN TEACHER.

By HOMER H. SEERLEY,

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Observations on the Preparation, the Training, the Authorization, the Status,
and the Prospects of the American Teacher in the American School.

Foreword.—There has been so much written for publication in reports on the problems of education in the United States that it seems to be a work of supererogation for any educator to undertake to contribute anything new or important to the general knowledge possessed. This presentation, of necessity, on account of its limitations, is confined to observations and conclusions that are more or less opinions obtained by experience and study rather than from extensive investigation or a complete survey. There is so much diversity, there has been so much evolution, there is such constant legislation, there has been so much modification of standards from decade to decade, and even from year to year, that the reports that have appeared have become more or less ancient history before they have been distributed to the public.

The American system.—In the United States the public system of education belongs to the States individually, the National Government reserving to itself sympathetic cooperation and generous good will. The function of the State is a dominating characteristic, as legislation is formulated and passed without any regard for reciprocity or cooperation of adjoining States, and hence policies are established and systems developed with an independence that could only be equaled by absolutely separate nations. At the same time the States confer upon the district organizations authorized—the county, the township, the town, the city, and even less territory—the right to organize, finance, manage, and direct the work of education, subject only to general laws governing the system as a whole. In the community is located the opportunity for initiative, the spirit of interest, the developing of enthusiasm, and the ultimate control of everything that decides the basis of all influences that the American teacher wields for public betterment and national welfare.

The State service.—In the outcome of the administration of public schools each State determines the minimum standard of the quali-

cations of the teachers who can make contracts for service and can be paid from the public treasury for the work assigned. In addition it provides certain general kinds of supervision such as represent State authority and county authority, while it collects and publishes reports, examines and certifies teachers, decides the minimum salaries that are allowed to be paid to ranks of teachers according to certificates obtained and to experience had; and where subsidies are granted for special purposes like the support of schools in mining districts, of work in training teachers, in encouragement of the consolidation of rural schools, etc., the State assumes more than general authority by maintaining inspectors that decide whether the standards required are met and whether the subsidies granted can be continued. All these contribute to the welfare, the status, and the success of the American teacher.

The school district.—While the State standards that are set up as the minimum may be accepted by the several independent school districts, yet, as a matter of fact, they do not prove to be the system of determination, as each local community and organized school district has the authority to decide what additional standards shall be required beyond the minimum. This local power in reality decides the course of study, the character and scholarship of the teachers that will be employed, the duties and requirements that are expected, the data that are regarded as essential in the contracts, and the regulations that exist in the conducting of the schools. In this way there are as many classes of standards as there are school districts, and as a consequence these local standards are the true bases on which the American school depends, and hence the State legal standards are more formal than effective, and while necessary in educational administration, they are not yet regarded as authoritative in deciding the employment of teachers, the construction of school-houses, or the administration of the work being conducted for the better education of the people.

The certification of teachers.—Where the State system undertakes the licensing of teachers according to the standards authorized by law, there are two methods commonly adopted, known as (1) the examining system, and (2) the accrediting system. The examining system permits a variety of grades of licenses, the lowest being the minimum legal requirements as to scholarship and training. The number of teachers thus licensed is frequently the majority of the teachers authorized by a State, and since teachers with these qualifications are obtainable at the least possible salaries, the less ambitious school districts employ them, and the rest of this class are out of employment and can go to school in preparation for taking an examination for a better scholastic grade. The examining system has the effect of furnishing a large supply of teachers that have the least

preparation that admission to the examination requires and has the additional effect of spreading abroad the impression that much attendance upon a school or college for the preparation for teaching is unnecessary and uneconomical. The accrediting system consists of a plan that recognizes graduation from some accepted training school as superior to the examining system, and to encourage such preparation, only the higher grade of teachers' certificates are conferred as honor indorsements for such commendable preparation. While the accrediting system has much reciprocity between the several States, it is based more upon the recognition of the educational institution from which the candidate graduates than it is on the recognition given the State from which the teacher is licensed, because the standards of institutions of higher learning are much more reliable in grade of qualification attained than are the systems of certification of the several States.

The preparation of teachers.—All the observations made thus far are preliminary to the discussions that are to follow because these fundamental conditions have much to do with the decision of young men and women to enter college for the purpose of being prepared for the public service as teachers. There must be consideration given by them to the economic situation as to the support of teachers in service, to the status that is promised as to employment, to the capability to transfer from State to State without needless difficulty, to the restrictions and limitations that are imposed by society and by administration upon the occupation, and to the opportunities for promotion in authority and in income that are granted for distinguished efficiency and for notable success. Hence the student body that is enrolled in teachers' courses in educational institutions is regulated by the law of supply and demand and by the equivalency of status that teaching gives in comparison with other occupations and professions that are found in the environment of these students. The ambition and the attitude of these students as to the importance and greatness of the service and as to the willingness to make far better preparation than any of the standards in force require, have compelled the higher institutions of learning that welcome their patronage to place graduation on a higher standard than is decided by legislators or administrative dictators in order to guarantee to those graduates all the indorsement and the opportunities that the best civilization demands, thus opening for the educator a province that is equivalent if not superior to other professions.

The status of the occupation.—Public-school teaching has always been and must continue to be uncertain as a permanent business. There can be no permanent tenure and there ought not to be any life employment where there is a necessity for a continued adjustment of demands and of services. This does not give a desirable situa-

tion, so far as the teacher is concerned, as annual elections are always occurring, and there is constant liability to be discharged, without hearing or explanation. This causes a disposition to seek a better salary and better security, as well as better prominence and authority, by being candidates for positions in another location. In fact, a common way to get promotion or to get more rapid recognition in the vocation is by leaving one community and becoming an employee of another community. In this struggle for prestige and promotion the less qualified teachers are subject to being released without opportunity to go elsewhere, and their places are given to young teachers who have better preparation for the work to be done. The recruiting of the profession of teaching is a wasteful system, as many persons under preparation must depend upon obtaining service by the process of elimination of those now in the employment of the public. The incoming prepared substitutes must be always a menace to the permanence of the service for all at work in the schools who have not enjoyed equal opportunity, as this plan of preparation of the young and the promising to drive the less successful from the business in order to have places for those better qualified is the American policy.

Classification of institutions.—There can be no satisfactory discussion of all the types of institutions that claim to prepare teachers, because they are so remarkably variable, but still there is a sort of classification that can be devised that will help make this discussion comprehensible if not complete, and thus permit a brief study of these many classes under more generic conditions. Every student of these problems can make this kind of a classification for himself and can improve on this in many ways, but the limitation as to space and time compels this segregation to be very general and broad, hoping that such a treatment will enable those interested to recognize the necessity of this organization of the undertakings existing in the several States. The classification here accepted is as follows:

1. Secondary institutions such as normal-training high schools, teacher-training classes, county training schools, etc., where the work to be done and that is preferred is almost all, if not entirely, secondary in grade and brief in training, the reason given for such work being temporary and emergent until something better can be done.
2. City institutions of many kinds that have been very fully studied by Frank A. Manny for the Bureau of Education in Bulletin No. 47, 1914. This is so full and complete that no attempt is given in this discussion to make more than very general observations on these classes of schools. They are variously named as city training schools, normal colleges, normal schools, teachers colleges, etc., each city using the title it prefers and changing the same at any time that the particular system decides as desirable. On account of their

being under no general law or required general standards, they are individual to such an extent as to limit their services to their particular cities.

3. State individual institutions such as are known as State normal schools, State normal colleges, State normal universities, State teachers colleges, and colleges of education. Some of them have the word "industrial" in their titles and some other occupational titles that indicate the wish of the legislative founders to determine that certain new types of education were intended to be emphasized in these institutions.

4. Educational departments in State colleges of agriculture and mechanic arts, where the original purpose has been to give major attention to agriculture, home economics, and related industries, and the teaching service along the major service of these State organized institutions.

5. State universities in which are organized colleges of education, teachers' colleges, departments of education, in the liberal arts college, and graduate colleges or graduate schools, as the several institutions have seen fit to develop their instruction in technical and scholastic courses, art, music, home economics, etc., to meet the public demand and also the demand of their students who are in preparation for teaching in high schools.

6. Independent colleges and universities not under the management of the States that are large contributors in most of the States to the preparation of teachers under similarly organized administration as exists in higher institutions of learning under State management and control.

The secondary schools.—In recent years several of the States have organized, under the supervision of the department of public instruction, training classes of high-school pupils in the junior and senior years, in which elementary psychology, elementary school management, methods of instruction, elementary agriculture, and elementary home economics are stressed as a special course of instruction and development for would-be teachers of rural schools. The work done is largely elementary in instruction and observation rather than that of actual training by any system of practice teaching. The State in each case in which this plan has been adopted assumes that the graduates from these courses will add much to the improvement of the supply of elementary teachers and hence subsidizes the work by a small appropriation which places these high-school departments, after acceptance, under the supervision of a State inspector, who gives his attention to the quality of the high-school teachers employed, to the thoroughness of the instruction obtained, and to the examining of said students to determine their fitness to be elementary teachers. Experience shows that the success

secured is far beyond the financial expenditures made by the State, and that the stock of elementary teachers with a modicum of preparation is thereby much increased.

In the next place, some States have organized a county normal-school system, the expenditures being provided by the State and by the county combined. The purpose of this plan is the same as that in the high schools, that of preparing a good number of elementary teachers at the time they are taking their secondary education. In some instances a county high school is also jointly conducted for the benefit of such pupils of similar grade who do not intend to become teachers. Where consolidation of rural schools occurs and where high-school advantages are provided in this combined rural district, the county normal school will not continue to exist, and a similar plan to that used in city and village high schools has been adopted. What has been said about public high-school teacher training can be said in a measure of private high-school instruction of teachers, as all of them are below the standard that is accepted as permanent and satisfactory, as the pupils in most instances are not of sufficient age or development to acquire the kind of education or gain the kind of training that is the best in standard for the preparation absolutely needed. All these attempts invade the years when the studies assigned should be of a different kind than the teaching business can give, and for that reason they must be regarded as emergent and temporary rather than suitable and commendable.

State individual institutions.—From the founding of the first State normal school at Lexington, Mass., in 1839, by James G. Carter, of Boston, Mass., to the present, the several States have organized and maintained State schools for the sole purpose of preparing young men and women for the difficult work of teaching. This Massachusetts conception of teacher training was that of short-time, intensive training, and little advancement in scholastic education. Other States and cities followed Massachusetts, as follows: New York, 1844; Philadelphia, 1848; Connecticut, 1850; Michigan, 1852; Rhode Island, 1852; New Jersey, 1855; Illinois, 1857; Pennsylvania, 1859; Minnesota, 1860. Then followed Kansas, Maine, Wisconsin, Tennessee, Iowa, Indiana, until to-day (1922) there are representatives of the normal-school idea in every State in the Union. There are many differences in the standards and ideals of the several States, but there seem to be certain geographical and historical differences that permit the grouping of these schools during most of their earlier development into (1) New England normal schools, (2) the southern normal schools, (3) the Middle States normal schools, (4) the northern Mississippi Valley normal schools, (5) the Pacific States normal schools. Each of these sections has shown much unity in its attempts to do a certain work in a certain way on a certain standard, and each

of them has had results that are definite and suited to the laws and the customs and the standards of its respective State. It is evident that constant and consistent progress has been made in three-quarters of a century in every State, thereby keeping pace with the advancement that has come to the public-school systems, as well as to that appearing in higher education. What these schools have become and what they are able to do has depended all the time upon the state of public opinion regarding the necessary qualifications of the teachers in elementary and secondary schools. Being very close to the masses and dependent for support upon appropriations made by the State legislatures, their expansion of service and their efficiency as educational institutions have been a part of the intellectual history of every Commonwealth.

The State teachers' college.—This kind of an institution for the preparation of teachers began in 1890, when the New York State Normal School at Albany was reorganized under the title "New York State College for Teachers." In 1897 the Michigan State Normal School became a degree-granting institution, under the title "Michigan State Normal College." From these beginnings it was only a question of time until most of the States of the Union would follow this metamorphosis and provide whereby the typical, independent State teacher-training institution would become a full-fledged, equipped teachers' college. This development became a matter of necessity when the standard of teachers in high schools became that of graduation from a full college course, and when the teacher training maintained originally for the State became national in scope and character. The best teachers in every State had become national in their service rather than limited to State boundaries. Out of these developing necessities legislation quickly followed, and the State teachers' college organization as an institution became more numerous by a large majority, so that the national organization of teachers' schools assumed the new title "American Association of Teachers' Colleges," and their courses of study evolved as rapidly as convenient and permissible. This new province brought special recognition, so that these new grades of institutions brought remarkable changes in standards and efficiency.

Values in education depend very largely upon the immediate usefulness of the knowledge and the training obtained. Without this degree of practical usefulness, the results desired in efficient teacher training can not be obtained, and the teachers' college must depend for its continuing success upon its effective methods of instruction and its practical adaptability to the civilization of the present. Its graduates must be awake to the spirit of the times, to the necessity to meet emergencies without delay, and to the reliability essential to reach accurate conclusions. It is for this reason that the teachers'

college of State type recognizes the demand of the age, its promoters study the needs of the present hour, thus keeping it in the front rank of the marching armies of social and educational progress. Too long has general education been a recital of the success of the past, and the assumed fully educated man has been a scholar and a recluse without relation to the worlds of business and of action.

The American people are intensely interested in keeping the public schools as a training service for citizenship. They want their teachers to be leaders in human progress. They desire them to have a capability that knows what the new tendencies in civilization are and also to have the qualifications of accomplishment that give progress and potency to the education that is given to the children of the Commonwealth, so that it shall mean conscious discovery and real intelligence. The day has passed when meager qualifications in the American teacher are accepted as sufficient to meet the demand. Anything less than a four-year college standard of teacher preparation for all grades of instruction is only permitted and accepted as a temporary expedient to meet a very great emergency, but any student in preparation who accepts a short course as a guarantee to high acceptability in the vocation will find himself embarrassed by being prevented from entering upon the opportunities that will soon appear in the horizon of his life, because he is not qualified to enter upon the inheritance that civilization is distributing to worthy and capable educators.

Since the Centennial Exposition in 1876 there has been gradually an upward tendency to all American educational institutions, public and private. Out of this movement colleges became universities, industrial schools have become technical colleges, grammar schools have become high schools, and State normal schools have finally become State teachers' colleges. Their reorganization was slower and later because their foundation was statutory, and their transition a legislative process. This very system of change is a permanent one, as it is a definite upward movement by the State determining this change of policy and of standards, and hence there follow, without urging, financial support and opportunities that are accepted as essential and important.

The State agricultural college.—The United States made provision for the preparation of teachers in agriculture and mechanic arts by subsidizing the work wherever organized under congressional acts, by encouraging the colleges of that order to use their facilities, granted by the States and by the Nation, for the advancement of the work of teaching in high schools the new arts and sciences developed by this new system of scientific education. Much benefit came to the training of teachers in the lines of agriculture and home economics by this United States grant, and from this movement there came also

much cooperation on the part of other colleges and universities not granted such subsidy, whereby they also gave instruction in these practical lines, thus multiplying teachers of these industrial subjects until the demand required by law was reasonably met. At the same time there was created a new kind of educator, known by the name of county agent in agriculture, county club leader, and home-demonstration agent in home economics, most of whom were well trained in these State agricultural colleges for this special kind of work permitted to be given to the people on their farms and in their homes by these educational experts. For the encouragement of this important educational service the National Government made grants that were given to the States if they cooperated by making equivalent financial appropriations. Then the States required the counties to give equivalent support either by county tax or from public or private funds, all of which combined gave most of the States sufficient means to employ in every county experts as a regular staff of public instructors. This arrangement of the Nation to get cooperation of the States and of the local communities has been of the greatest efficiency, because at the same time the standards of qualification have been determined by the Nation and enforced by the agricultural colleges as the designated authority, selected by the Nation for such management. What has been said about county management and control of the education of the people in these practical arts can also be said about the Smith-Hughes high school, in which special teachers approved by the vocational board of the State and of the Nation and special subsidies of the State and the Nation assert an authority that gives supervision and direction into the hands of qualified officers. These things and the board and practical extension systems of these agricultural colleges supported by joint State and national funds have made a change in the content and the consequences of public-school education that can hardly be appreciated by the average citizen because they are largely beyond the activities of the standard public schools and are additional to public-school management.

The universities and colleges.—In an early day in the history of American education, Brown University organized and conducted at Providence, R. I., a department of education whose function was to give instruction to college students who planned to enter upon education as a business. The plan undertook to prepare State supervisory officers, school superintendents of cities and towns, and administrative officers of academies and colleges. Before that time, if any American wanted to secure definite and expert instruction in the fundamentals and philosophies of education, he had to go to Europe to secure it. In fact, John D. Philbrick, one of the first public-school superintendents of the United States, elected at Boston, Mass.,

found it necessary and desirable for him to go to Europe for study and investigation before attempting the new duty of developing a scientific system of common schools that he deemed was the best for public welfare in that day. In a similar way Horace Mann and Henry Barnard found it necessary to depend upon European ideals and models to give their great undertakings prestige and scientific value. Their lectures, contributions, and publications are full of information from these sources, thus admitting the primitive condition of education a hundred years ago in America.

The Brown University undertaking of that time finally lapsed because it did not receive the patronage and the support that had been expected. The would-be educators of the United States had not yet found that such preparation was required. Later the State University of Iowa established a chair of didactics in 1872 as a division of its work in the college department, and has continued this with different degrees of success from that time to the present. A little later the University of Michigan established a chair of education, thus giving emphasis to the new movement for the preparation of college students as teachers. This plan has been accepted and is now attempted by all creditable universities and colleges, public and private, at the present day.

In most instances these undertakings have been organized to accommodate the patrons of the institutions. When the number of students was few, from year to year, the plan adopted consisted of a chair or professorship of education, the title being generally the "Department of Education." When the work assumed larger proportions and the faculty consisted of groups of specialists, instructors, and lecturers, the organization was made in the form of a college with a dean, the title being "College of Education," "Teachers' College," or "College for Teachers." The results of this undertaking, covering a period of 50 years, have been chiefly those of educating high-school teachers, superintendents, and college instructors.

The graduate college.—The final educational enterprise in the United States that sought the uplift, the improvement, and the developing of teaching as a profession was the graduate college, a grand division of a well-established university or college, for the purpose of giving more advanced study and training than scientific and liberal arts colleges undertake to give. The courses that were provided led to the conferring of the master's and the doctor's degrees and have been adopted for the training of experts in research and in investigation, as well as for scholars for the higher types of teaching. In these graduate schools the candidates for appointments in college and university departments are prepared for superior capability and for larger accomplishment in the service of public

education. These institutions have had a marked effect upon the training and the preparation of teachers for public elementary and secondary schools in all organized collegiate institutions, because they not only train research workers and scientific experts, but also college teachers who are specially qualified to accept service in normal schools and teachers' colleges. They become professors, heads of departments, directors of divisions, expert psychologists, and investigators of educational problems and of methods of instruction for public schools. In addition, they instruct in the methods of interpretation, of mentality, and degrees of development of students and of pupils, giving aid to teachers by their technical information and making these teacher-training institutions more scientific, more progressive, and more effective in their efforts to prepare competent educators for the common schools than could have otherwise been possible.

In all these ways the various higher institutions of learning, the numerous colleges and universities, public and private, have united in making up a national system of preparing teachers by cooperating in every way that can be invented to forward scholarship, knowledge, and culture as the necessary bases of a notable, progressive, and complete civilization. Such a combination of State and voluntary agencies respect one another, have confidence in each other, and inspire all to have a grand part in a national system of education that is in reality one of the best known in the world of organized effort and accomplishment, guaranteeing a safe and sane outcome that is certain to perpetuate democracy as the best plan for governmental success.

Preparation of teachers in service.—The final act of attempting to improve teachers consists of organized efforts of extension instruction for the immediate help of the teachers in service. This plan of instruction commends itself wherever it has been developed, because there has been great need for many years for more of this kind of instruction than can be done by the common teachers' institutes, teachers' associations, parent-teacher organizations, and general or special study clubs. This plan is conducted differently by different States—sometimes by some one or more State institutions, sometimes by the State department of public instruction, and sometimes by business organizations developing correspondence work. So far as teachers in service are concerned, the most effective system is that in which the work done gives credit upon the courses of study of some standard teachers' college, as they can then unite extension study and summer-school study and thereby gradually complete a standard course and eventually secure a diploma that gives State recognition in a reasonable time at moderate expense. The holding of extension summer schools in different parts of the State on the same plan as that

used at the campus institution also gives a large opportunity to help teachers in service that can only be appreciated as to its value by being tried. The most effective and important extension service during term time is the organization of credit classes for teachers that are of the same quality and quantity as such subjects receive at the teacher-training institution that gives continuous study and recitation from week to week until a definite amount of work has been mastered. The effect of such effort is the returning of the teachers to an activity that produces mental rejuvenation and thereby produces the superior effect of improving mental capacity and mental equilibrium. Under a wise management, conservative as to standards and as to satisfactory returns, a limited amount of correspondence work will cooperate helpfully with student teachers who can not be gathered into extension credit classes for definite reasons or who can not profitably take the assigned subject that the extension class organized has selected. All these kinds of instruction require as nearly as possible the same standards of accomplishment and of examination that are universally required in the classes conducted at the institution by the regular faculty.

For actual help in definite lines of methods and of subject matter that can be profitably given to public-school teachers, the spending of several Saturdays a year at the several county seats where all the teachers are assembled gives notable results, if the subjects selected and treated are known by the county superintendent of schools to be specially needed. This requires as a necessity that the lecturers and instructors be experts on the phases of education they undertake to represent. Another very valuable kind of extension work is what may be described as consultative service, a kind of endeavor where an expert in music, an expert in art, an expert in reading, or an expert in any other phase of teaching in the grades visits the schools, inspects the work that is done in every room, gets the point of view accepted, and then meets the teachers with the superintendent and discusses what is being done, in what way it can be improved, emphasizing the better way by giving demonstrations of what is the best approach and the best accomplishment. This method, slightly varied, can be used to instruct teachers in the using of mental tests and measurements, as the teachers of a system can meet for several consecutive days and be given practical training in all the more important lines of investigating mentality and personal fitness of the pupils for the work assigned. A thorough study of such a system of work, followed by a careful investigation of all the pupils' capabilities and efficiencies, as well as their inequalities and shortcomings in a practical way, will generally lead to many changes of methods of instruction, so that success will be more certainly attained. A change also is attainable in the method of grading,

whereby every pupil in every class studies and recites every school subject in the right section in the system, and whereby every pupil becomes happy, interested, and successful because he is able to master fully the tasks he is assigned to do. It is thus that capability is acquired, that personal efficiency is comprehended, and that safe and sane instruction is accomplished. The improvement of the army of teachers in the United States is an undertaking that is worth the large investment required, as thereby standards of scholarship, of preparation, and of efficiency can be exacted and accomplished in two decades of enterprising endeavor.

The year 1922.—It may be appropriate and judicious to render to the year 1922 its fair place in educational progress, as the reader may not be trusted to recall the great things concerning teacher progress that must be credited to the present by the historians of the future. It must not be assumed that such perfection has been reached in public affairs that there is not an imperative necessity to seek better things for the immediate future and for greater considerations and accomplishments in the remote future, because the solution of educational problems is a task of generations instead of the task of the present day.

During 1922 there has been unusual reorganization in educational institutions that prepare teachers, the half of which could not be told; there have been so many evidences of advancement in standards and in prospects for the qualified teacher that the best informed can hardly realize the progressive development made; there have been such large increases in expenditures for the education of teachers that it would seem that the great American public had but recently awakened to the noteworthy importance of a qualified teaching staff. Take as an example the American State teachers' colleges that have been definitely transformed from the old-style State normal schools to first-class educational institutions of higher learning by acts of State general assemblies and with such statutory understandings that will positively require immediate returns of the highest character. It is not extravagant to say that educational history has gone by leaps and bounds that have never been equaled in decades of time in previous years of effort. The growth in a year experienced by departments and colleges of education, associated with universities, not to mention the extraordinary increase of students in graduate schools making education their major, shows a result that no description that is deservingly made can be equal to the progress that exists. All this has come to America because of the extraordinary organizations of teachers in the Nation and in the States, because of the unrestricted activity of National and State officials who have led in these incomprehensible enterprises, and because of the forcefulness of the educational press and of the educa-

tional authors whose works on teaching published in the United States are combined evidences of a progress, an enlightenment, and a spirit that must give an encouragement and a hope that assures to the American Republic a greatness and a distinction that can not yet be appreciated.

Conclusion.—For these interpretations of existing conditions in the United States dependence has been placed upon the voluminous reports of many organizations, many educational officers of State, city, and Nation, and many years of personal experience in the business of one State in the preparation of teachers. It was the writer's privilege to pursue a year's study under the direction of one of these early departments of education in a State university in 1872-73. He has followed with much interest the expansion of the work of fitting teachers for public schools. He has observed with concern one of the undesirable developments of the schools and colleges of education, and even of teachers' colleges, which consists of their partial separation from contact with the actual public school, and the substitution of the private demonstration or experimental schools managed by these institutions. This developing situation is likely to lead to a lack of sympathy and to develop a sort of incompetency and lack of that true knowledge which those who essay to prepare teachers for public schools should have. No one can professionally pose as a great public-school authority who does not believe in the American system of secondary and elementary education and thus comprehend and appreciate its adaptability and competency in the educating and the training of an American citizen.

CHAPTER XXI.

EDUCATIONAL RESEARCH.

By BIRD T. BALDWIN, assisted by MADORAH SMITH.

I. INTRODUCTION.

The past two years have witnessed a substantial growth in the number of scientific studies in education from the empirical and experimental points of view. The scientific method which for the past decade has been most prominently associated with investigations in educational psychology is also being applied with increasing success to costs and finance, buildings, grounds and equipment, organization and administration, the curriculum, and surveys in special fields of education. This biennial review aims to present in brief form the principal contributions in the main fields of education, excluding "mental tests." An effort has been made to show the influence of research organizations, research bureaus, foundations, laboratory schools, and educational periodicals for the years 1921 and 1922.

II. CONFERENCES.

Among the most stimulating organizations for fostering the scientific approach to contemporary educational problems and procedure may be mentioned the recent tendency for universities and teacher-training colleges to devote a week to educational conferences. Annual reports for the past two years are now available from the San Jose Teachers' College, Calif.; Ohio State Educational Conference at the State University; Annual Schoolmen's Week at the University of Pennsylvania and the University of Minnesota; Florida High School Principals' Conference at the University of Florida Teachers' College.

III. NATIONAL EDUCATIONAL ORGANIZATIONS.

A large number of educational organizations, national and local, are now actively engaged in studying various phases of educational problems and policies. Among the organizations that have emphasized the research aspects of education may be mentioned the American Council of Education, Washington, D. C., which studies the larger questions of educational policy.

The Educational Research Association is organized to encourage the establishment of bureaus of educational research and to promote the improvement of school efficiency. The membership to this organization is attested by the qualifications for educational research. The association aims to unify the activities of workers throughout the country, to correlate the efforts of those who are originating, organizing, and directing educational investigations and experiments.

The National Society for the Study of Education has for many years promoted investigations and discussions on educational questions. The National Society of College Teachers of Education holds annual meetings and issues reports and monographs on problems dealing with the professional phases of education. The section of the American Association for the Advancement of Science has extensive programs in scientific experimental education annually.

To the above association should be added the Phi Delta Kappa, a professional educational fraternity having a membership of 4,500 in 26 of the leading universities of the country. This fraternity supports "the highest educational ideals and encourages an unswerving allegiance to the principles underlying public education." A similar society for women, Pi Lambda Theta, now has 15 active chapters in this country.

Among the other associations which issue yearbooks are the National Association of Secondary School Principals and the National Education Association.

IV. FOUNDATIONS.

During the past two years there has been an increased tendency for foundations to furnish funds for research work in education. Some of these foundations have for several years been contributing directly or indirectly toward the advancement of education.

The Carnegie Corporation of New York has made substantial appropriations to the American Council on Education for investigations in the financing of public education in the United States. The Carnegie Foundation for the Advancement of Teaching has endowed a division of inquiry. Substantial funds have also been given to the regents of the University of the State of New York and the Teachers College, Columbia University, for research on the laws governing education in the State of New York, the preparation of teachers, and the study of units of intellect and capacity.

The Carnegie Foundation for the Advancement of Teaching has organized from time to time the study of various special educational problems in relation to the retiring allowances and its effect on the advancement of teaching.

The Commonwealth fund has made a large number of contributions to various educational research workers in various parts of the country. The main contributions center around (a) Educational finance; (b) curriculum studies, with special reference to teaching methods, learning processes, and materials of instruction; (c) reorganization of the educational system, with special reference to units of administration; (d) individual differences among pupils.

The general education board originally was founded in 1902 for the promotion of education in the South, but its work is much more extensive now. It has contributed to the endowment of colleges, toward medical institutions, and increase of teachers' salaries; made studies in finance; and conducted surveys of education and farm demonstration work.

The Jeanes fund, for the improvement of negro rural schools, cooperated during the session ending June 30, 1922, with public-school superintendents in 273 counties in 13 States. The 275 supervising teachers, paid partly by the counties and partly through the Jeanes fund, visited regularly in these counties 7,850 country schools.

The John F. Slater fund now aids 156 county training schools.

The Rockefeller Foundation contributes to research in medicine and hygiene and only indirectly to educational research, but it does contribute to medical education, rural health demonstrations, and other agencies for public health.

The Laura Spellman Rockefeller Memorial is also contributing funds for research work in certain phases of educational work. For many years the Russell Sage Foundation has maintained a division for educational research.

V. RESEARCH BUREAUS.

A recent tendency in the scientific movements of education has become apparent through the establishment of a large number of educational research bureaus throughout the United States. These bureaus are not only clearing houses for educational literature, intelligence tests, and achievement scales in subject matter and supervision, but also active laboratories for educational experiments and demonstrations. The movement is developing so rapidly that a complete list is difficult to secure. The 80 centers listed below will furnish a tangible index of the present status of this development in the empirical approach to the science of education.

1. CITY EDUCATIONAL RESEARCH BUREAU.¹

Aberdeen, S. Dak. M. P. Staker, director, bureau of educational measurements.
Akron, Ohio. A. O. Heck, director, bureau of educational research, public schools.

¹ In the preparation of this list material assistance has been rendered by John K. Norton, director of research of the National Education Association.

- Ardmore, Okla.** H. D. Rinsland, director, bureau of research, city schools.
- Atlanta, Ga.** H. H. Bixler, director of educational research, board of education.
- Baltimore, Md.** J. L. Stenquist, director of educational research, public schools.
- Beaumont, Tex.** Clara Mallory, director, educational research, 1016 Liberty Street.
- Berkeley, Calif.** Virgil E. Dickson, director, bureau of research and guidance.
- Birmingham, Ala.** W. E. Putman, director of research department, board of education, Administration Building, 2030 Park Avenue N.
- Boston, Mass.** Arthur Kallene, assistant director, bureau of research, Huntington Avenue.
- Chicago, Ill.** A. B. Wright, director of statistics and reference.
- Cincinnati, Ohio.**
- Cleveland, Ohio.** C. H. Mann, acting director of reference and research.
- Cuyahoga County, Ohio.** Full-time assistant superintendent in charge of educational research.
- Denver, Colo.** Emma M. Brown, director, bureau of research, public schools; George W. Frazier, bureau of educational research, public schools.
- Detroit, Mich.** P. T. Bankin, bureau of educational research.
- Duluth, Minn.** Ray Latham, assistant superintendent, department of elementary education.
- Des Moines, Iowa.**
- Emporia, Kans.** D. A. Worcester, director, bureau of educational measurements, Kansas State Normal.
- Fresno, Calif.** Miss Mary B. Cummings, director of department of research.
- Grand Rapids, Mich.** C. D. Dawson, assistant superintendent of schools.
- Hibbing, Minn.** J. W. Richardson, director, educational research.
- Highland Park, Mich.** H. C. Daley, director, survey department.
- Honolulu, Hawaii.** Katherine Murdock, director of research, Hanahan School.
- Indianapolis, Ind.** Murray A. Dalmap, director of research, reference and statistics.
- Jackson, Mich.** Helen Davis, director, educational and mental measurements.
- Kansas City, Mo.** George Melcher, director, bureau of educational research, Library Building.
- Lewiston, Idaho.** C. L. Harlan, department of educational measurements, Lewiston State Normal.
- Little Rock, Ark.** Department of educational measurements. G. T. Huckaly, supervisor.
- Long Beach, Calif.** E. P. Branson, director, bureau of educational research, city public schools.
- Los Angeles, Calif.** A. H. Sutherland, director, department of psychology and educational research.
- Louisville, Ky.** B. W. Hartley, director, bureau of educational measurements.
- Martins Ferry, Ohio.** Mrs. Margaret Brainerd, director of educational research.
- Minneapolis, Minn.** Dr. J. Brueckner, Bureau of Educational Research.
- New York City.** Eugene Nisenecker, director of reference, research, and statistics.
- Newark, N. J.** E. D. Sexton, assistant superintendent, department of reference and research.
- New Orleans, La.**

Oakland, Calif. Virgil E. Dickson, director, bureau of research and guidance.
 Omaha, Nebr. L. O. Smith, assistant superintendent in charge of research.
 Pasadena, Calif. W. H. Hughes, director of research.
 Pittsburgh, Pa. J. F. Guy, director of research and measurement, 720 Fulton Building.
 Rochester, N. Y. J. P. O'Hern, assistant superintendent in charge of research.
 Santa Ana, Calif. Mary B. Henry, director, research and guidance.
 St. Louis, Mo. F. L. Wiley, director of tests and measurements.
 St. Paul, Minn. L. L. Everly, director of research.
 Seattle, Wash. Fred C. Ayer, director, department of research.
 Trenton, N. J. J. M. McCallie, bureau of educational research and efficiency.
 Virginia, Minn. W. A. Justice, director of research.
 West Allis, Wis. T. L. Torgenson, director, educational research, city schools.
 Youngstown, Ohio. Henrietta V. Race, director, bureau of educational and mental measurements, board of education.

2. STATE AND UNIVERSITY BUREAUS FOR EDUCATIONAL RESEARCH.

California. Whittier State School. J. Harold Williams, director bureau of juvenile research.
 California. State Teachers' College, San Jose. Bureau of research and extension.
 California, University of. Bureau of research in education. Virgil Dickson, Berkeley and Oakland, Calif.
 Carnegie Institute of Technology. Department of educational research. E. K. Strong, Jr., director.
 Colorado State Normal School, Gunnison, Colo. H. T. Manuel, director of educational research.
 Columbia University. E. L. Thorndike, director of institute of educational research.
 Idaho. Lewiston State Normal. Bureau of educational measurements. C. L. Harlan, director.
 Illinois, University of. Bureau of educational research. W. S. Monroe, director.
 Indiana, University of. Bureau of cooperative research. H. L. Smith, director.
 Iowa Child Welfare Research Station. State University of Iowa. B. T. Baldwin, director.
 Kansas State Normal, Emporia. Bureau of educational measurements. D. A. Worcester, director.
 Kansas, University of. Bureau of administrative research. F. J. Kelly, director.
 Michigan, University of. Bureau of education, reference, and research. Director, Clifford Woody.
 Minnesota, University of. State board of education research bureau, St. Paul, Minn. Frederick Kuhlmann, director.
 Nebraska, University of. Teachers' College, bureau of educational measurements. Charles Fordyce, director.
 New York, State University. J. Cayce Morrison, specialist in educational measurements.
 North Dakota, University of. Bureau of educational measurements. F. M. Garver, director.
 Ohio State University. Bureau of educational research. B. R. Buckingham, director.
 Oregon, University of. Bureau of educational research. C. A. Gregory, director.

Pennsylvania. State Normal School, Bloomsburg. Bureau of educational research. J. P. Hering, director.

Pennsylvania. Institute for the Instruction of the Blind, Overbrook. Department of research, Samuel P. Hayes, director.

Pennsylvania, University of. Leroy A. King. Bureau of educational measurements.

South Dakota. Northern normal and industrial schools, Aberdeen. Bureau of educational research.

Virginia, University of.

Wisconsin. State Department of Public Instruction, Madison, Wis. Dr. W. J. Oslum, director of educational measurements.

VI. EXPERIMENTAL SCHOOLS.

Another approach to research in education is through the laboratory and experimental schools affiliated with colleges and universities. These are becoming an integral part of the best schools of education and represent the logical outcome of the earlier demonstration and practice schools which are also of significant value in developing a science of education.

College and university laboratory schools are now organized at Bryn Mawr, University of California, University of Chicago, Columbia University, Drake University, George Peabody College for Teachers, University of Illinois, Indiana University, State University of Iowa, Louisiana State College, Miami University, University of Minnesota, University of Missouri, University of Nebraska, New York State College for Teachers, University of Oklahoma, University of Oregon, University of Pittsburgh, Smith College, University of Wisconsin, University of Wyoming, and Winthrop College.

Among the experimental schools that are aiding in advancing education in the empirical field are the so-called schools for progressive education, such as the Francis W. Parker School, in Chicago; the Bureau of Educational Measurements, in New York; the Child Education Foundation and Children's University School, in New York; the Fairhope Organic School, in Alabama; the Park School, in Baltimore; the Shady Hill School, in Massachusetts; the Play School, in Berkeley, Calif.; and approximately 40 others with a similar point of view.

A longer list of progressive public schools in various sections of the country could easily be cited whose experimentation is extensively carried out in all phases of school administration and instruction.

VII. PERIODICALS DEALING WITH EDUCATIONAL RESEARCH.

No factor has contributed more to the dissemination of the scientific point of view in education than the splendid cooperation of journals in this and allied fields. A large number of these maga-

zines and monographs provide for the publication of experimental and statistical studies, with ample facilities for the inclusion of charts, tables, and diagrams. The principal periodicals contributing directly to the research phases of education are:

- American School Board Journal*. Monthly. The Bruce Publishing Co., 354-364 Milwaukee Street, Milwaukee Wis. Edited by William G. Bruce.
- Educational Administration and Supervision, including Teacher Training*. Monthly. Warwick & York, Baltimore, Md. Edited by W. C. Bagley, W. W. Charters, I. D. Coffman, A. Inglis, D. Snedden, G. D. Strayer.
- Educational Review*. Monthly. Doubleday, Page & Co., Garden City, N. Y. Edited by Frank P. Graves.
- Elementary School Journal*. Monthly, September to June. University of Chicago Press, 5822 Ellis Avenue, Chicago, Ill. Edited by the faculty of the School of Education of the University of Chicago.
- Journal of Applied Psychology*. Quarterly. Indiana University Press, Bloomington, Ind. Edited by James P. Porter and William F. Book.
- Journal of Educational Psychology*. Monthly, except June, July, and August. Baltimore, Warwick & York. Managing editor, Harold O. Rugg.
- Journal of Educational Research*. Monthly, except July and August. Official organ of the Educational Research Association. Public School Publishing Co., Bloomington, Ill. Edited by B. R. Buckingham.
- Journal of Experimental Psychology*. Bimonthly. Princeton, N. J., Psychological Review Co. Edited by John B. Watson.
- Mental Hygiene*. Quarterly. Published by the National Committee for Mental Hygiene, 27 Columbia Street, Albany, N. Y. Edited by Frankwood E. Williams.
- Pedagogical Seminar*. Quarterly. Worcester, Mass. Edited by G. Stanley Hall.
- Psychological Bulletin*. Monthly. Princeton, N. J., Psychological Review Co. Edited by Shepherd I. Franz.
- Psychological Index*. Annual. Princeton, N. J., Psychological Review Co. Edited by Madison Bentley.
- Research Bulletin of the National Education Association*. Published in January, March, May, September, and November by the research division of the N. E. A., 1201 Sixteenth Street NW., Washington, D. C.
- Science*. Weekly. The Science Press, 11 Liberty Street, Utica, N. Y. Edited by J. McKeen Cattell.
- School and Society*. Weekly. The Science Press, 11 Liberty Street, Utica, N. Y. Edited by J. McKeen Cattell.
- School Review*. Monthly, except July and August. University of Chicago Press, 5822 Ellis Avenue, Chicago, Ill. Edited by the faculty of the School of Education, University of Chicago.
- School Science and Mathematics*. Monthly. East Seventy-second Place, Chicago, Ill. Edited by Charles H. Smith.
- Teachers College Record*. Every two months, except July. Bureau of Publications, Teachers College, Columbia University, New York City. Edited by J. E. Russell.

Among the most significant monograph series may be mentioned the following:

Archives of Psychology, from Columbia University, frequently deals with the psychology of the learning process.

Educational monographs, issued by the Society of College Teachers of Education, present studies for discussion at annual meetings of the society.

Educational Psychology monographs, published by Warwick & York, Baltimore, report extensive studies in the field of educational psychology in book form.

Journal of Educational Research monographs, printed by the Public-School Publishing Co., of Bloomington, Ill., include longer studies of the same type appearing in the journal.

The National Society for the Study of Education Yearbooks, also printed by the Public-School Publishing Co., are discussed at the annual meetings of the society. Many of the yearbooks are the result of cooperative work by committees of the society.

Psychological monographs, issued by the Psychological Review Co., Princeton, N. J., appear as separate studies of particular psycho-educational problems.

Supplementary education monographs, edited by the faculty of the School of Education of the University of Chicago, present a body of scientific and practical material on reading, arithmetic, penmanship, algebra, home economics, kindergarten-primary education, the curriculum, the student population of American secondary schools, and the administrative organization of elementary schools and high schools.

Teachers College Contributions to Education are published by the board of publications of Teachers College, Columbia University, and present serial studies in the history and philosophy of education, educational psychology, kindergarten, elementary and secondary education, educational administration, and related fields.

United States Department of Interior Bulletins are issued by the Bureau of Education, Washington, D. C., and include surveys, reports, and the results of investigations.

In addition to the above, education monographs are also issued from time to time by the Universities of California, Harvard, Illinois, Indiana, Iowa, Johns Hopkins, Ohio, and Pennsylvania.

VIII. COSTS AND FINANCES.²

Studies in public-school finance have been made for the States of Colorado, Iowa, Minnesota, and Wyoming by Swift (15), Russell (12), Swift and del Plains (16), and Slade (13), Holy (6) and Lindsay (8) (9) have contributed to the Iowa survey. Other surveys in press are: For California, by Cubberley; New York, by Strayer; and Illinois, by Morrison. Swift has made a comparative study of State policies in public-school finance. The National Com-

²The numbers in parentheses in the text refer to items in the bibliography, pp. 52-77.

mittee of the Chamber of Commerce, Cooperation with the Public Schools (10), has published a report on its inquiry Number III, relating to boards of education and the receipts and expenditures of urban public schools. Frasier (4) has studied the data for 169 cities in order to determine the factors of efficiency, and concludes that the city with an elected board and with financial independence has a better chance for an efficient school system.

Carter and Thiesen (3) report on the advisability of publicity campaigns for school support. Burgess (2) has published a book on the Trends of School Cost, and the National Education Association (11) has published a bulletin of Facts on the cost of public education, dealing with the increasing cost, salaries, and professional status of teachers.

Johnson (7) has studied the teacher's load and cost of each item through a questionnaire.

In university and college finance there is a Bureau of Education (5) bulletin on the expenses of women college students; a study by Stevens (14) on cost per student hour of different subjects and departments in the University of Washington. But the most extensive study in college and university finance is by Arnett (1) and includes a study of receipts, disbursements, endowments, plant, accounting, reports, and organization.

Swift (17) has written a monograph presenting the most significant conclusions in an extensive study of school finance in a number of States continued over a period of several years.

IX. BUILDINGS, GROUNDS, AND EQUIPMENT.

Bulletins dealing with buildings and grounds and allied topics, published by the Bureau of Education, are on high-school buildings and grounds (2), school grounds and play (4), the housing and equipment of kindergartens (1), public-school dormitories (9), and teachers' homes (12). There is also a study of the functions and administration of school janitors (6).

Textbook selection.—Two books have been published dealing with the selection of textbooks. One of these by Maxwell (10) gives score cards; a general one to use in judging all texts and specific cards for different subjects, but few of the objective criteria have been scientifically determined. The other study is by Franzen and Knight (5) and consists of two parts—judging high-school texts in literature by the criterion of interest, and geographies by the criterion of comprehension by means of reading tests constructed from the text of five series. Horn (8) suggests that book companies develop silent reading manuals, the outstanding characteristics of which should be

these: (1) They should be rich in factual and informational data; (2) the content of the selections should be worth while; (3) most of the selections should be of sufficient length; (4) some selections should contain data given in great detail; (5) some selections should be preceded by guiding problems; (6) each selection should be followed by appropriate comprehension tests and tests to measure organizing ability; (7) the book should contain an excellent index and table of contents; (8) the mechanical make-up of the book should be good.

Libraries.—On libraries, we have a comparison of public library facilities of different States by Miller (11); of university libraries in 1915 and 1921 by Reeder (13); a study of high-school library book selection from the viewpoint of a science teacher by Glenn (7); and a study of standardization of library work and equipment for history by a committee of the Mississippi Valley Historical Association (3).

X. SCHOOL ATTENDANCE AND ENROLLMENT.

Ensign (6) has made a study of the development of legislation for compulsory education in relation to child labor. Another study, in *The American Child* (9), deals with the effect on child labor in agriculture of compulsory attendance laws. Bonner (1) (2) (3) has studied the effectiveness of the compulsory attendance laws of each State.

Walters (10) (11) (12) has given annual reports of enrollment statistics in several colleges and universities. There are also Bureau of Education bulletins on the subject. Koos (7) (8) has studied the residential distribution of college students from the point of view of desirable locations for junior colleges. Byrne (4) has studied high-school enrollments and determined the ratio to population in 43 large cities. West and Koos (13) have tried to estimate the size of freshman classes in 1940 from high-school enrollment. Counts (5) has studied the parental occupation of high-school pupils in four cities in relation to progress through school, curriculum elected, and plans for after graduation.

Town (9a) has made an analytic study of a group of 5 and 6 year old children in order to determine what kind of children the Iowa homes are sending to the Iowa schools. Each child was given a physical, anthropometric, speech, and mental examination. One important conclusion reached is that the basis of physical defects and character defects is already fixed when the child first enters school.

XI. RETARDATION AND ELIMINATION.

Most of the studies in this line are in connection with intelligence tests. There are a number of studies on the value of intelligence tests in prognosis and the relation between failures and mental tests which do not fall within the scope of this bulletin. Kelly and Loomis (5) have made a study of the extent of retardation in one-room rural schools in Kansas and compared it with the retardation in town schools and found it greater. Gwinn (4) has found that changing from school to school affects the child's progress. McCormick (7), in a study of high-school failures in La Crosse, found important factors to be the attitude and study habits of the pupil; cooperation between student, parent, and teacher; personality; professional preparation and attitude of teacher, also intelligence of pupils.

Smith (10), in a study of high-school failures, found the percentage of failure, increased from year to year, was greatest in the modern language curricula and in English and mathematics, the tendency to fail varied directly as age of pupil on entrance and inversely with the amount of home study. A study by Rogers (9) of retardation of both grades and high school in Baltimore showed irregular attendance and late entrance or early learning to be the causes in 26½ per cent of cases; physical defects or illness in 9 per cent; indifference in 21½ per cent and low ability in 42½ per cent. Forty-two per cent of the failures were in English and 41 per cent in mathematics. Buckingham (1) reports a successful experiment in promoting failing pupils on probation.

The chief cause of elimination of pupils in Phoenixville, Pa., was found by Doughton (2) to be desire or necessity to work. Eaton (3) studied the scholarship of pupils leaving school and found an average of 2.04 failures per pupil for the group leaving as against 0.8 for the entire school. Leaming (6) found from a study of 908 children applying for working certificates that most of them left because of dissatisfaction with school and were not from the successful group in school.

Nifenecker (80) has made a study of retardation in New York City and pleads for greater flexibility in grading, in course of study, in methods of advancing pupils, and for a more "purposive program."

XII. ORGANIZATION AND ADMINISTRATION.

The junior high-school movement is the outstanding feature in school organization, particularly in the Middle West and West, and many studies have been made as to its extent. Among these are reports by J. H. and J. C. Clement (15) (a-b), Philips (61), Pratt

(66), and Smith (74), as to the status of organization and administration of junior high schools in large cities. Rodgers (72) has studied particularly the curricula and programs of 101 schools. Lyman (50) (51) (52) and Gould (33) have described the organization, curricula, buildings, methods, and activities of certain typical junior high schools. Spain, Moehlman, and Harrington (77) have prepared a bulletin dealing with similar topics in great detail on the Detroit intermediate schools. Koos (46), through a canvass of educational literature and the securing of ratings by 124 judges, has arrived at a ranking of the relative importance of the peculiar functions of junior high schools.

One study compares the effectiveness of the junior high school with that of the old 8-4 plan. This is by Briggs (9) in Los Angeles to determine to what extent junior high school pupils persist in school and to what extent secondary education electives are economically offered in the "intermediate" school. He found a higher per cent of high-school graduates had come from "intermediate" than from "elementary" schools and that the "intermediate-school" graduates bring on an average 10.2 credits to high schools, are more stimulated to earn credit in summer school, and that 82 per cent of them continue the electives begun in intermediate school. Briggs (9) has also made a study on extra-curricular activities in junior high schools and published a text on the junior high school (10).

Another type of school of increasing importance is the junior college. Besides a study of distribution of enrollment, L. V. Koos (45) has made a comparative study of the curricula of 58 public and private junior colleges.

The rural school is another type of organization being studied. F. H. Koos (44) has compared it with larger organizations as to cost, expenditures, education, salary, and tenure of teachers. Brown (11) has made an intensive study of the school in a Michigan village from the point of view of showing the inequality of educational opportunity.

Chapman and Eby (14) and Frost (30) have made comparative studies by educational measurements of the achievement of children in country and city schools. The evidence in both studies is strongly in favor of the larger school systems.

Rapeer (67) has published a text on the consolidated rural school, most of the material of which is based on reports, investigations and observations of actual conditions, and deals with the topics of history, administration, organization, curriculum, methods, and rural life needs.

The platoon school, individual system, and Dalton plan are three types of organization being tried out. Spain (76) and Bankes (2) describe the former type as being developed in Detroit and Akron.

Washburne (87) describes the individual system as carried on in Winnetka and gives the result of a questionnaire sent the teachers, all of whom approved the system as a whole and reported children saved from failure by the method. Dextey (19) and Parkhurst (60) both have described the Dalton plan in operation.

The extent of provision and type of work provided for mental defectives has been studied by Anderson (1). Voorhees (85) has investigated the growth in knowledge of academic subjects and made a follow-up study of pupils in a prevocational room for the backward. Poole (63) (64) and Richards (71) report on diagnostic teaching of a few cases of backward and difficult children. Wallin (86) has made a study of the achievement of subnormal children; and Reamer (70) of the deaf in educational tests.

The provision made for exceptional children in the schools has been studied by Gesell (31). J. L. Horn (38) has studied the reasons for leaving school of an eighth grade class in Oakland and urges that funds should be available to support highly endowed children of poor parents so that they may continue in school. Studies have also been made by Omans (58), Freeman (29), Hughes (39), and Dvorak (23).

The Nineteenth Yearbook of the National Society for the Study of Education (35) is given up to classroom problems in the education of gifted children. Mr. and Mrs. Omans (59) describe an experiment in a special class for gifted children at Ypsilanti.

The value of a grouping of children by abilities and consequent changes in school procedure is reported on by Cox (17), Henderson (34), King (43), Mahony (53), Spain (76), Rapp (68), Kuntz (47), Odell (57), Carback (13), Hines (36), Cole (16), Berry (4), Glass (32), Stetson (79), Branson (6), Wilkerson (26), Dickson (22), Dawson (20), (21), Fordyce (27), Terman (81), Pintner and Marshall (62), Callihan (12), Stockton, Davis, and Cronin (80), Kent (42), Lowell (49), Neff (25), Breed and Breslich (7), and Thiesen (82).

The relation of size of class to school efficiency has been studied by the Illinois Bureau of Educational Research (84). Very little difference was found between the work of large and small classes in either elementary or high school. Monroe (56) also found very little relation between sectioning a class and the effectiveness of instruction. Porter (65) reports on the effects of segregation by sex on scholarship in a Detroit high school. He found the boys' marks showed 8 per cent improvement and the girls were lowered 18 per cent when separated. These marks showed closer correlation with intelligence test than did their marks before separation.

Time distribution in Louisiana schools (24) has been studied by the Callender laboratory of Newcomb College in order to obtain a basis for a study of the ~~most~~ effective time distribution.

Stark (78) has developed principles of school management through the study of concrete school situations. In his text he presents 241 practical problems with an account of the process of their solution in which teachers, principles, superintendents, and parents take part.

Jackson (41) and Satchell (73) have made studies of the extent of pupil government or participation in school administration in high schools. Thornton (83) has studied the extent of the women's forum, or its substitutes with types of work and details of organization in normal schools, colleges, and universities.

The present system of marking has been much criticized. Franzen (28) suggests the use of the accomplishment quotient in school marks. Hopkins (37) has studied the marks given by the college entrance examination board of Harvard from 1902 to 1920, and found the distribution diverged widely from the normal curve. He criticizes the methods used by examiners. Beatley (3) has compared the standing of students in secondary school and entrance examinations with later marks and finds a combination of comprehensive examinations and secondary-school record the most effective.

Cunningham (18) has studied the sex element in college grades from both men and women instructors. Westfall (88) has found correlations between grades in different subjects in simultaneous and consecutive courses and those with one, two, and three semesters intervening. He found the correlations decreased as time between taking courses increased. Rathbun (69) describes a system used in the University of Washington for weighting grades so as to equalize the difficulty of securing high grades in different departments.

In elementary schools there are several systems of marking being worked out. One of these being tried is the accomplishment quotient. Marot (54) describes an elaborate system of school records which will provide information for marking changes, concrete illustrations, and show achievement and progress made. Kyle (48) describes a marking system which resulted in a close approach to the normal curve. Beverly (5) discusses the use of the Trabue scale by children in rating their own work. Hughes (40), 1920, describes a combination system of supervised study, varying scope of work, and weighted credit.

Two studies of types of examinations are reported—one by the staff of instructors in contemporary civilization in Columbia, with the assistance of Thorndike (89); the other by Monroe (56). Both conclude that the "new" examinations with questions permitting

only one correct answer is preferable, though Monroe calls attention to certain limitations.

XIII. TEACHING AND SUPERVISORY STAFF.

The most frequent type of study in this field is that of surveys of the preparation or status of teachers. Such investigations as to status have been made of all teachers in 359 cities by the National Committee for Chamber of Commerce (60), of junior high school teachers in 99 schools (58), (57), and of Texas high-school teachers (62); of the preparation of high-school teachers in the accredited schools of the North Central Association (15), and another in Oregon (59) and Pennsylvania (50); of rural school teachers in Pennsylvania (35); and of all teachers in Missouri (39). Other surveys deal with the status of the visiting teacher (49) and the causes for which children are referred to her and methods employed. Burgess (9) (10) has studied the rate of progress in teacher preparation by comparison in 14 States of 1910 and 1920 statistics; Minick (43), the amount of practical work and practice teaching done by high-school teachers in Pennsylvania and New Jersey; Benson (4), 10,000 teacher-training graduates. The study indicates the relative length of the tenure of trained and untrained teachers, types of curricula in demand, distribution of trained teachers among different types of schools, and occupations of graduates who did not teach.

The most extensive study of the curricula used in teacher training is that published by the Carnegie Foundation (39) dealing with the educational and administrative aspects of the preparation of teachers in State normal schools. It includes also topics on the origin and growth of normal schools in the United States, particularly in Missouri; the government and organization of normal schools; the curricula and personnel of Missouri normal schools, their operation, administration, and product. Foster (23) has studied the status of Smith-Hughes practice teaching by means of a questionnaire. Coffman (12) has made a study of teacher-training departments in Minnesota high schools. Williams (64) (65) has made a similar study of demonstration teaching and observation in 295 institutions. Burnham (11) has made a survey of the teaching of mental hygiene, and a survey of the status of educational sociology has been made by Lantis (38). Gray (27), Schulte (55), and Douglas (21) have all studied the distribution of time or assignment of student teachers, and Brueckner (8) describes an experiment in their training by means of field work. Ross (52) reports on the status of county teachers' institutes in Pennsylvania.

Anderson (2) by means of a questionnaire has arrived at three basic courses in education, which he describes. One he calls intro-

ductory and informational, one theoretical and general, and the third a course in schoolroom procedure.

Franzen (24) has made a comparison between general and special methods courses in teaching high-school subjects by means of analyses of outlines, notebooks on syllabi, and descriptions of both types of courses. He has listed the topics treated in order of frequency in different types of courses, and as a result of the study suggests standards for the two types of courses.

The Bureau of Education has published bulletins by Koos (37) on standards in graduate work in education, by Cook (13) on the laws and regulations on the certification of teachers in different States, by Gleim (26) on the visiting teacher, one by Dawson (17) on the preparation of teachers of the social studies, and another by Cook (14) on the provisions for, and methods and results of, the supervision of rural schools in different States.

Charles Russell (54) presents a thesis on the improvement of the city elementary-school teacher while in service. It includes a survey of the historical background, a study of school reports to determine what are the present agencies in use for teacher improvement, the fundamentals of improvement, and an outline of the steps through which a teacher must pass in becoming the mature master.

Waples (63) gives a table of the relative value of college education courses obtained by gathering the opinion of high-school principals. Lowery (40) reports a study of the attitude of college students toward teaching.

Greenan (28) has studied the distribution of time of East Orange high-school teachers for teaching, clerical, advisory, and disciplinary work.

Douglas (21) has made a study of the market for prospective high-school teachers. A similar study would be of value to colleges of education.

Morton (46) reports a study in grading examinations from which he concludes that this method of licensing teachers is too inaccurate.

Studies as to the characteristics desirable for a teacher are reported by Osburn (48) and Smith (56), who deal especially with industrial teachers; and by Hanly (29) and Dolch (20), who take it up from the child's viewpoint. The outstanding contribution in this field is Knight's (36). He had 153 teachers rated by the mutual ratings of supervisors and pupils and against these ratings correlated objective facts. Correlations with age, experience, and quality of hand writing were too low for prognostic purposes, but ability to pass a professional test, normal-school scholarship, and in the case of the high-school teacher, intelligence seemed significant.

C. O. Davis (16), by means of a questionnaire, has arrived at the following duties of a high-school principal:

1. To formulate a vision and a policy for the school * * * and to communicate this vision to his entire staff.
2. To lead in the formulation of ways and means for realizing their vision and policy.
3. To supervise instruction, inspire teachers and pupils, coordinate and articulate efforts.
4. To serve as the school's agent before the public.
5. To share confidences with his teachers and pupils; * * * delegate to them * * * responsibilities; * * * and unify the work of the entire school.

Hudelson (31) has studied the actual distribution of time between different duties by principals in West Virginia. He concludes that they need clerical assistance. McClure (41) reports a study of requisites for appointment and duties of principals in 17 to 20 large cities. He found much discrepancy between theory and practice, too much time given clerical work, too little time to supervision.

Morrison (44) has made a study of supervision from the teacher's viewpoint, from which he concludes that the principal could help most by suggestions, inspiration, cooperation, help in discipline, and the discussion of problems of instruction in teachers' meetings; the assistant superintendent by demonstration teaching, organizing teachers' meetings, giving teachers self-confidence; the supervisor in suggestions, outlines, and personal conferences; the department heads in helping to prepare outlines and lessons, grouping children by ability, and in improving technique of teaching.

Gist and King (25) made a study of the principal only from the same viewpoint. The most mentioned ways in which he could help were in the care of the exceptional child, with the course of study, as a professional leader, in prompt delivery of supplies and equipment, and by a well-defined system of management.

Morrison (45) has made a study of the legal status of the city-school superintendent, using as sources statutes, historical writings, general principles of government, and judgments of leaders in education. The first of these sources is his main reliance. Some conditions revealed are the predominance of small boards, a four-year term of office, and the disappearing ward representation in school boards. The powers in which the superintendent is most nearly independent are enforcement of attendance, granting of working papers, making of formal reports, and supervision of instruction.

Almack (1) has studied the duties and training of city superintendents by means of a questionnaire and a study of published rules and of texts. He found the appointment of school officers and teachers, supervision, teachers' meetings, making reports, enforcing rules, attending board meetings, and the study of other school systems among the more frequently mentioned duties.

S. W. Johnson (33) reports a study by questionnaire of the relations between superintendents and school boards in Iowa, taking up such topics as causes of failure, factors in success, difficult problems for board and for superintendents, the manner of selecting the board, and closing with recommendations as a result of the study.

Struble (61) has studied school-board personnel, classifying board members as to vocations, age, sex, experience, number of their children, and miscellaneous factors, and rating board members as to their influence, valuableness, progressiveness, and leadership.

There have been several studies on salaries made, but not so many as in 1920. Some of these are by the Massachusetts Department of Education (42) of conditions in that State; Eaves (22) on old-age support of women teachers, also in Massachusetts; and the National Education Association (47) on salaries in cities of 100,000 population and over. Bonner (6) made two studies, one of high-school teachers' salaries, the other (5) dealing particularly with opportunities for advance and concluding that the salaries of experienced teachers especially should be increased. Arnett (3), in 1921, made a study of salaries of college teachers. Deffenbaugh (18) has a study of the salaries of administrative officers and their assistants in large cities. Hertzog (30) discusses State maintenance of teachers in training as a solution of teacher shortage.

The value of use of intelligence and standardized tests in supervision is shown in studies by Brooks (7), with rural schools, Dickson and Norton (19), Ruch (53), Kallom (34), Rogers and Baker (51), and Johnson (32). The last two studies consider especially their value in evaluating different methods of instruction.

XIV. METHODS OF LEARNING AND TEACHING.

In the field of general methods the project method and socialized recitation continue in the foreground. Library Leaflet, No. 17, February, 1923, of the Bureau of Education (26) gives a list of references on the project method in education which is quite complete. Parker (16) has written a series of articles on the thinking process, showing the importance of problem solving, presenting illustrative school lessons and rules for stimulating thinking, and a biographical study of how eminent men think.

Taylor (23) has compared 30 lessons taught by the socialized method with those that were teacher-directed and found the socialized classes gave better results.

A comparison of the traditional method and a freer method tried in first grade is reported by McCall, Chassell, and Hollingworth (14). The free group in first grade made less progress in seven tests and

more in three; in second grade less progress in four and more in one, but the differences were very slight.

Richardson (19) discusses what he calls the campaign method, defining a campaign as characterized by a recognized need, definite time limits, organized effort to stimulate and sustain interest, with its success resting upon others than its organizers. He reports three campaigns in the four fundamental processes which resulted in marked improvement.

Linke (13) describes an experiment in teaching in response to children's questions. A comparison of the lecture method with the question and answer method, tried in 11 high schools, is reported by Alderman (1). He found that the former method was slightly better in grades 10 to 12 and the latter better in grades 7 to 9. Pupils of superior ability did better by the lecture method, those in the fourth quartile by the other method. Two studies of presenting matter to college students by Holton (8) and Horne (9) both favored the discussion method.

Hunter (10) compared the textbook, lecture, and developmental method and found they ranked, for immediate retention, developmental first, lecture second, textbook third; for delayed retention, lecture first, developmental second, and textbook third; for power, developmental first, textbook second, and lecture third. He also compared oral developmental with laboratory manual and found the first method superior. In an experiment comparing visual and oral instruction he found the oral method preferable.

Weber (27) has studied the effectiveness of visual aids in seventh grade instruction. He found showing films method superior to an oral presentation when the subject matter was largely descriptive, but in another experiment where four methods of presentation were used—films, film-lecture, oral, and printed descriptions—the film method did not secure such superiority. Measured by ability to give information verbally, the first methods gave approximately the same results, but measured by the ability to draw, the visual method was distinctly superior.

Monroe (15) has made a study of the types of learning required in different school subjects and their relative difficulty. He found the most frequent types are:

Type I, comprehension of material read plus memorization, so that it can be reproduced; Type IV, obtaining information for the purpose of solving problems or answering questions; Type XI, drawing valid conclusions from given data or statements; Type IX, a clear comprehension of the essential conditions of a problem which is to be solved.

The types varied for different subjects. The most difficult types from the standpoint of the pupil are Types XI and I above. Type XI is also the most difficult with reference to instruction.

Robinson and Heron (20) studied the effect of variations in length on memorizing by the use of nonsense syllables, and found, with increasing length of material, a negative acceleration in the memory curves. Laird, Remmers, and Peterson (12) found that organization and classification of material is an aid to memorizing and that it is probably more beneficial, the more meaningful the material.

The value of interest in learning is shown in studies by Bridges and Dollinger (4), who found a correlation of $+0.22$ to $+0.28$ between subject's rank in interest and the grade the student received. Thorndike (24) obtained a correlation of $+0.46$ between the rank which a college student gives a subject for interest and the mark he receives in that subject in comparison to the marks he receives in other subjects. Freeland (6), in a year's study of the daily learning of six children, found interest to be one of the significant factors, others being physical condition, mental alertness, and tenacity. Waples (25) has reviewed the problem of interest in education in a five-chapter study which takes up a classification of the literature of the subject, discussion of the value, the development, the social modification, and social expression of interest.

Book and Norvell (3) studied the effect of interest in improvement on 124 college students in four simple kinds of learning and found that interest in improvement served as a directive force, and concluded that "interest in improvement and belief in its possibility aid mental adaptation and the formation of new and better methods of work" (pp. 354). Arps (2), in a comparison of work done with or without knowledge of results, arrived at a similar conclusion. Work without knowledge of results was reported as very deadening.

Peaks (17) has studied the periodic variations in efficiency, summarizing important studies of the influence of heat, weather, humidity, and time of day or year on efficiency. Some of his conclusions are that there are three periods of physical and mental growth in the school year, one of depression in January to March, and two favorable, September to December and March to June.

Sullivan (22) studied the effect of mood upon performance and found it insignificant. Garrett (7) concluded from experiments upon judgment that each individual has an optimum rate for accuracy.

General texts on learning have been published by Kirkpatrick (11), who deals particularly with the place of imagination in education; Stratton (21), whose purpose was to determine the relative importance of special mental facilities and the transfer of training; Edwards (5), whose text includes many useful suggestions with regard to methods of study; and Pyle (18), who reports many experiments in his book, *The Psychology of Learning*.

XV. METHODS OF STUDY.

Webb (8), 1920, reported on the habits of study of college students. He found superior students use good methods more than do poor students, but the majority of good methods are not used by the majority of students. They use better methods for examination. Study habits are merely picked up and students should be taught how to study. In another similar study by Webb (9), a comparison of the methods used by students of four different teachers was made in an attempt to prove that the habits of study should be considered in measuring effective teaching.

Garth (3) reports a similar study in which he found only 4 per cent of students were studying in "true problematic fashion." The median method of study used was about half way up on the scale for measuring methods of study whose preparation he describes.

Elizabeth Thorndyke (7) reports on environment as a factor in a pupil's study life. The data were obtained from 1,600 high-school pupils. Seven per cent preferred to study at home, the rest at school. The place in which they would be least interrupted was usually preferred. Other reasons for preferring to study at home were more continuity, and chance to study aloud; for preferring to study at school was the fact that everyone else was studying, and that there was an opportunity to get help.

Clayton (2) made a closely allied study in attitude toward school work and found girls and older pupils spent more time than boys, and younger pupils and the girls were more contented than the boys.

Germane (4) has studied the value of outlining and summarizing compared with rereading with both college and grade students. He found the rereading group excelled those summarizing, but when the summary was stimulated and directed by specific problems, it gave the better result, and this superiority was even greater when writing was eliminated, especially in the grades. Yoakum (11), who studied the effect of a single reading, found that only a small proportion of material read was retained and that repeated testing was an efficient method of securing retention.

Studies in memorizing still continue. Woody (10) found oral reading superior to silent reading in the memorization of poems for the majority of individuals studied. Robinson (5) found that the relative merits of distributed and concentrated study of numerical material depends upon the total amount studied, the units into which it was divided, the stage at which efficiency was tested, and whether the criterion was accuracy or time of recall. Achilles (1) has made an intensive study of recall and recognition and finds a low but positive correlation between the processes and low correla-

tions for recall or recognition of different materials. Both processes increase with age, and women and girls are slightly superior to men and boys. Skaggs (6), using nonsense syllables and poetry for material, found the interspersed method of reading recitation better than methods of grouping.

XVI. THE CURRICULUM.

Studies in the curriculum in general are not strictly of a research character, but there are several new publications that approach this field experimentally.

An outstanding study is Bobbitt's (1), which, by the method of examination and analysis, arrives at a statement of the specific aims of instruction. Bonser (2), Meriam (4), and Wells (7) have published texts on the elementary curriculum as organized about activities which are based on experimentation. Part I of the Twentieth Yearbook of the National Society for the Study of Education (6) contains a collection of 295 projects, classified by grades, which have been tried out in different schools. The Course of Study Monographs of the Berkeley public schools (8) are also the results of committee reports and classroom test. Charters' and Moore's books on the curriculum have just appeared.

Mott and Deyricks (5), by means of a questionnaire addressed to 874 high-school graduates, have rated each subject of the high-school curriculum as to its value for economic use, enjoyment, citizenship, home making, and good will. On the basis of these ratings they advocate a redistribution of time among the different subjects.

Kehr (3) has made a comparative study of the college curricula for men and women, from which she concludes that for both sexes there is need for vocational guidance.

The Lincoln School, in New York, is making a thoroughly scientific study of the curriculum. Similar studies are being made in the Universities of Iowa and Chicago.

1. READING.

The subject of reading has predominated in the formulation of curricula studies. Part II of the Twentieth Yearbook of the National Society for the Study of Education was devoted to the subject of silent reading. To this study Thiesen (53) contributed a summary of the evidence of previous investigations as to the factors affecting results in primary reading, the most important of which he finds is probably intelligence. Other factors showing some correlation are interest, supervision, quality of teaching, amount of reading, eye movements, vocalization, attendance, comprehension of material, nationality, language used at home, and presentation of words in

context. Factors studied but on which the evidence was still inconclusive were kindergarten training, time, and phonetics.

Further studies in some of these factors have been made. Webb (59) reports correlations between Army Alpha scores and reading rate of $+0.49$ and with comprehension of $+0.68$; between Thurstone intelligence scores and reading rate of $+0.58$ and with comprehension of $+0.64$. Hunt (31) finds correlations between Otis intelligence and rate of reading of $+0.38$ and with comprehension of $+0.48$. Hunt has also found in a study of fourth and seventh grade children that extensive readers obtain higher scores in both reading rate and comprehension than do nonreaders. J. L. Green (23) also found a correlation between achievement in reading and amount done. Three experiments have been described in which special attention was paid to reducing vocalization.

O'Brien (41) carried out a controlled experiment in which different types of training in rapid silent reading were tried, one of which differed only in special attention being given to decreasing vocalization or inner articulation. This type of training resulted in marked superiority in amount of improvement made. Photographic records of eye movements showed this improvement was accompanied by a reduction in the number of fixation pauses and regressive movements but by little change in the length of pauses.

The other two experiments by Waldman (57) in fourth grade, and by C. W. Stone (51) with college students involved several other factors, so that the decrease in vocalization is not the only cause in their success in improving the reading ability of their students.

Buswell, by the method of photographing eye movements, has arrived at important conclusions reported in three different monographs. In the first of these three (10) he has found by synchronizing the photographic records of eye movements with dictaphone records of the voice that good readers differ from poor readers in the length of eye-voice span, in the number and duration of fixation pauses, and in the relative length of eye-voice span in different parts of the sentence.

In collaboration with Judd (34) he has made a scientific analysis of the various types of silent reading, comparing eye movements in skimming, careful reading, and study; and in the reading of simple prose, poetry, geography, history, and algebra texts, Latin and French. Most of the records showed that effort results in a narrowing of the span of recognition, lengthening of the fixation, and regressive movements, although some pupils seemed unable to change the level of attention. Latin pupils did not really read but puzzled out meanings. French pupils did much better.

In another study, Buswell (9) traces the development of the reading habit from the beginning to maturity. He found such de-

velopment to proceed by the reduction of the number and length of fixation pauses, and of regressive movements. Reduction in the number of pauses reaches a plateau in fourth grade. In the length of pauses the plateau is not reached until sixth, but growth in decrease of regressive movements continues into college. Development is quite different in type after the first four years. Correlations between these three types of data and Gray's oral and Monroe's silent reading tests are set forth in graphs. A comparison is made of different methods of reading, which shows that more than one method may succeed in developing mature reading habits, but different methods show quite different curves. He also shows by an analysis of individual cases how far children may deviate from the usual route and describes the remedial exercises used in those cases where the pupils had apparently deviated too far from the usual route to indicate probable attainment of efficiency. Breitweiser (6), in a monograph on training in rapid reading, reports an unpublished thesis by Fereshetion, of Colorado College, in which he demonstrates the possibility and value of pacing the eye movements in training for rapid reading.

Wilson (61) has studied the effect of different types of material on reading ability and found that reading ability varied greatly according to the type of material read.

Burgess (7), in a brief study, shows the advantage of grouping according to ability; Hawley (26), the effect of clear objectives; and James (32), the value of using the results of measurements in improving reading ability. La Rue (36) reports a small experiment in the use of the shorthand alphabet in teaching pupils to read and urges its adaptation to printing as a substitute for our English alphabet.

The value of rapid silent reading on ability to recall is demonstrated in experiments by Gilliland (19), Harvey (25), and O'Brien (41).

Special devices tried out with success and reported are the use of flash cards by Watkins (58); use of practice tests involving cut-outs, pasting in picture frame, picture dictionary, and story sheets by Nila B. Smith (47); and sets of reading cards, calling for action or language responses and used by the children as a game, by Hoover (28). A special technique followed in the University of Chicago laboratory schools, resulting from experimental study, is described by Shepherd (45).

The psychology of reading, with special references to disability, has also been studied by several investigators. Gates (18) includes spelling in his study in which he has attempted to devise a technique for diagnosis, to discover the factors in acquiring ability in reading and spelling, to ascertain the causes for disability in these lines,

and to try out remedial measures. The defects found associated with disability were those of mental ability, vision, articulation, eye muscular control, eye movements, eye-voice span, training, emotional stability, and also disinclination. He found no evidence for word blindness.

William S. Gray (21) reports the diagnosis and remedial treatment of 27 pupils backward in reading. For each case he gives a general description; preliminary diagnosis by means of intelligence and reading tests; detailed diagnosis by individual vocabulary test and analysis of types of difficulties; and study of eye movements and description of remedial instruction and its results.

C. T. Gray (20), in his monograph on deficiencies in reading, analyzes reading ability, and gives a compilation of tests and methods of observation to be used for diagnosis which includes tests for vocalization, eye movements, and breathing as well as the more usual reading tests. He presents a critical account of remedial work carried on by various teachers and investigators and summarizes leading publications on reading. Fernald and Keller (15) report six extreme cases of nonreaders and describe the method used in treating them, calling particular attention to the need for study of kinaesthetic factors in the development of word recognition.

Other studies dealing with disability in reading are by Anderson and Merton (1), Freeman (16), and Poole (44).

Thiesen (54) has surveyed the provisions existing for individual differences in reading and makes suggestions as to which are of the greatest merit.

So much progress has been made in research in reading methods that courses and texts in teaching reading, based on scientific study, are beginning to appear. Among such may be listed courses outlined by Parker (43) and McFarland (39); and on methods by Leonard (37), Wm. A. Smith (48), Stone (50), Simpson (46), Wiley (60), Lloyd and Gray (38). Ballou (2) offers an outline of a normal course in beginning reading, the result of 103 questionnaires and opinions of 75 teachers.

Germane and Germane (17) have written a text on silent reading in which the topics of silent or oral reading, speed, comprehension, organization, retention, questionable methods, remedial work, measuring, and material are discussed and the finding of the leading investigations in these various lines reported. Methods and material suitable for each grade are outlined and lists of books and materials are given in the appendices.

Studies in content of reading courses have been approached in two main ways: One through a study of children's interests, the other by analyses of texts.

A study of the interests of children 2 to 7 years old and of the phrasing they themselves use in telling stories has resulted in the *Here and Now Story Book*, by Mitchell (40). Dunn (12) has studied the interests of children in grades one to three, and finds the reading materials best liked contains the factors of plot, narration, conversation, morality; for boys those factors also of surprise and interest in animals; for girls also the factors of child interest and familiar experience. She found their rating of material very different from that of adults. Jordan (33) investigated the interests of children from 9 to 18 years old. He found marked sex differences, which were greatest at 12 and 13 years old. The boys preferred in fiction, stories of war, scouting, school and sports, and adventure; in nonfiction, "what-and-how-to-do" books, and history and biography in exciting story form. The girls preferred fiction portraying home and school with other types such as fairy stories, and love, while tales with historical background were preferred by less than 10 per cent. They showed little interest in nonfiction. Jordan lists favorite authors and magazines for both boys and girls. Chamberlain (11) prepares a study on the difference in reactions to English classics where boys and girls recite separately. Eaton (13) has studied reading interests in high school. Though he, too, discovered the greatest interest in fiction and stories, he found over half the boys reading voluntarily essays and travel, biography, and science; 40 per cent reading history, 38 per cent poetry, and 26 per cent religious books; over half the girls read poetry and biography, 42 per cent religious books, 34 per cent essays and travel, 26 per cent history, and only 9 per cent science. He lists favorite magazines and authors for both sexes.

Uhl has two studies, one (56) on junior high-school interests in informational reading selections which showed the pupils to be much interested in selections on inventions, transportation, manufacturing, and cost of living; the other (55), based on reactions of 529 pupils, and a questionnaire sent 2,253 teachers resulted in the selection and grading of a number of selections of reading material. Desirable qualities included actions and character, adventure, humor, easy content and diction, familiarity, and portrayal of the supernatural, kindness, and loyalty. Green (23) found better readers less interested in fairy tales than poor readers.

King (35), in an investigation embracing about 4,800 children, has obtained a list of favorite poems for elementary school children which she presents, classified in order of frequency of choice, according to type of poem, and in a suggested course of study. She also lists the reasons given by the children for their choice.

Hosiac's (29) investigation in reading was carried along four lines: Opinions of authorities as to aims and methods of teaching

literature; analysis of "study helps" in four sets of readers; evidence as to common practice of teachers in teaching literature; and experimental teaching. This was to determine the relative value of different methods and devices. He concludes that informal methods and no insistence on details at the expense of the whole are to be preferred.

Burgess (8) has published a monograph on the measurement of silent reading in which she has made a useful exposition of the laws of a scientific procedure in the construction of reading tests; contributed an analysis of reading as a function; and set up a sample of experimental and statistical study.

Several analyses of texts to determine vocabulary or content have been made. Holmes (27) has analyzed a primer and two readers for phonic facts; Erick and Selke (14), the vocabularies of beginning books in 12 reading methods; and Packer (42), a number of first readers. All find most books contain words of very limited frequency, and a limited number of words are common to the different books.

Woody (62) and R. E. Stone (52) have studied the content of second readers; Starch (49) and Hosiac (30), that of readers for all grades in order to determine the amount of duplication or overlapping between different sets of readers, so that readers supplementary to each other may be selected more surely and in order to determine the type of material included.

In mechanics of reading books, Blackhurst has made two studies; one (4) on the size of type as related to readability in the first four grades, from which he concluded that 24-point type was best in grades one and two, and 18-point in grades three and four; the other (5) is a study of books used in grades one to six in different decades. In the later study he found size of type, length of line, and leading all had increased in every grade since 1890, the decade of greatest change being that of 1890 to 1900.

Bamberger (3) presents the results of a study on the effect of the physical make-up of a book upon children's selection. The factors of choice found are color of cover, nature of title, wide margins, and number and type of illustrations.

Surveys of reading ability have been made on Iowa children by Greene (22), and in Idaho by Harlan and Madsen (24).

2. HANDWRITING.

Freeman is still the leading investigator in the field of handwriting. He has published serially in the *Elementary School Journal* (2) a course in handwriting for grades two to six, based on a preliminary course used experimentally in a public school in Kansas.

City, Kans. He has also made a study (1) on the handwriting movement by means of an analysis of the movements of good and poor writers through motion-picture study. The amount of arm movement was measured by an instrument, giving a tracing of it and comparing the degree of correspondence of the tracing with the original writing. He found good writers showed a looser grasp of the pen, held the arm more nearly perpendicular to the writing and the forefinger lower than the thumb-with wrist tilted not more than 45 degrees, but he found no evidence that the good writers used arm movement more than the poor writers. Of the 243 children studied, almost none had complete arm movement, although it had been taught them. In regard to speed he found that the good writer adapts the speed to the stroke, the speed being greater at the middle than at the beginning or end of the stroke, but there is no sharp contrast in speed. Using exercises based on these results, training classes were taught and showed greater progress than in two schools used as controls.

West (5) has studied the relation of rhythm to the handwriting movement and found imposed rhythm an aid only in early years: for a writer with habituated speed and rhythm would be slowed and the quality of his writing lowered by any beat slow enough to be consciously followed.

Shaw (3) reports an experiment in supervision of handwriting carried on in Detroit from which it was concluded that supervision does pay and that it is most effective when special attention is given to those in need of assistance.

Walker (4) describes what he calls the "unit plan of penmanship practice" developed in St. Louis in which pupils irrespective of class standing were divided into three groups of good, mediocre, and poor for writing lessons, and were promoted from one group to another individually. He found that the plan reduced failures, lessened time necessary, and simplified supervision.

3. MATHEMATICS.

Thorndike has been the leading contributor to research in this field. He has published several separate studies (24) and two books: One (21) on the new method in arithmetic which is based upon principles discovered by the psychology of learning, experimental education, and the observation of successful school practice; the other (23) on the psychology of arithmetic. In this book he discussed the function of bonds, control of the response connections, means of obtaining and of measuring improvement in their function, desirable degree of strength of bonds at different stages of learning, the original

tendencies on which the school may base its connection forming, application of laws of learning, and inheritance of special abilities.

In Algebra, Thorndike (20) has studied the abilities involved in algebraic computation, problem solving and intelligence, which he finds correlate highly; and the permanence of school learning (22) which he finds to be greater than the idea prevalent to-day. Woody (32) has corroborated the result in his study. Thorndike, in collaboration with Woodyard (25) has also studied the uses of algebra and geometry by means of an inventory of high-school textbooks and of articles in the Encyclopedia Britannica. They conclude that the parts of elementary algebra most used are the statistical graph and formulae and that mathematics is of importance to the understanding of subjects of general interest.

Woody (31) has investigated the types of arithmetic needed in certain types of salesmanship by means of an analysis of 4,661 bills of sale. Symonds (18) states 13 uses of mathematics found in society. He estimates the number of persons making such usage and suggests dividing the course of study into three parts in order to provide for different uses. G. M. Wilson (28) reviews previous studies and presents a study of problems actually solved by mature people as one method of determining the curricula in arithmetic. Rosenberger (12) urges the inclusion of the elementary calculus in the high-school course, basing his plea on a study of the status and present trend of mathematics in secondary schools in the United States and abroad, a historical survey of the growth of the calculus, and a comparison of textbooks. The Bureau of Education (9) publishes a bulletin on the course in mathematics in secondary education.

J. H. Smith (15), by measuring the time required for recall, has determined the relative difficulty of arithmetical combinations for each of the four fundamental operations. Osburn (3), through a study of errors in arithmetical fundamentals made by Wisconsin children, concludes that the comparison of numbers above the 5's is more difficult than that of those below, and addition of numbers whose sum exceeds 10 is more difficult than that of those whose sum is less than 10. Zero combinations, division of numbers by themselves, carrying, and particularly borrowing are difficult.

Spaulding (17) has analyzed six third-grade arithmetics in order to determine the exact nature of the work offered and how far the textbooks studied make an appeal to the needs and interests of the pupils. He gives tables showing the number and per cent of problems and examples in each text, and the distributions according to operation required, subject matter, occupations, and measurements involved.

Knight (6) analyzed 45 columns in addition drill exercises. He concludes that in construction of drill exercises the frequency with which different numbers appear in the columns is a poor index of the distribution of practice, and that the frequency of the unseen numbers should be considered as well as that of the seen numbers.

Marsh (8) has compared the school standing in second and third-year high school of pupils taking mathematics in first year with those who did not, the groups studied being almost exactly equal in first year. He found that those studying mathematics in their freshman year were decidedly superior in the work of the next two years in high school.

Buckingham (2) presents correlations between mathematical ability and intelligence that do not seem to show as close relation as previous studies.

Kolstad (7) found a definite relation between the school grade finished and one's ability in later adult life to solve arithmetic problems. He found the average American literate adult to have an ability equal to about that of seventh-grade school children.

Schorling (14) gives a description of experimental courses in mathematics tried out in 15 schools, which he considers not so much scientific experiments as "purposeful innovation."

Two studies on the relation of visual imagery to geometric ability are reported. Wood and Bell (29) found some correlation, but a lower one than that of immediate recall, verbal expression, and absence of motor manifestation with ability in geometry. Washburn, Hatt, and Holt (26) found good correlations between geometric ability and speed in control of visual imagery test and a slight correlation with accuracy in control of visual imagery.

Hoover (4) describes an extensive experiment in utilizing the play instinct in arithmetic drill by means of sets of cards involving the fundamental operations which were used as a game for children. The section using this method gained 17.8 per cent in accuracy as against 14.1 per cent for those not using it.

Kelly (5) has compared three types of drill in grades four to eight in Lawrence, Kans. The drill was carried on for 20 days and the results showed greater gains and better adaptation of drill to the individual child by both the Curtis and Studebaker material than by ordinary schoolroom procedure.

Estaline Wilson (27) and Newcomb (10) have described successful experiments in teaching methods of problem solving in arithmetic.

Beatty (1), in a study of 175 San Francisco pupils in grades four to six, concludes that the Austrian method does not show real superiority over the borrowing method of subtraction, for, although all the pupils had been taught by the former method, 121 used

another. The medium accuracy of those using the Austrian method was but 2.4 per cent higher than that of those using the borrowing, and their median rate was 8.2 as against the median rate of 9.2 of those who worked by the borrowing method.

Reese (11) has reported on the working out of the individual system at Winnetka in the case of arithmetic.

Terry (19) has investigated the reading problem in arithmetic through an examination of the methods used by adults by means of introspective reports, time and quantity records, and photographic records of eye movements. He found a special technique in reading numerals of one to seven digits which consists in locating the beginning and end of the numerals, developing habits of many brief eye pauses, and definitely grouping digits in pairs or by threes. In problems there is a partial reading of the numerals, a rereading either for further information or inspection before copying, and a second rereading during computation for such details as are required.

Schmidt (13) has studied 34 cases of extreme retardation in arithmetic, all of whom were normal in general ability. None were deficient in number sense. In 15 cases the trouble appeared to be due to ill health and in 14 to lack of interest. Ill health during third grade appeared to be particularly disturbing.

Wood (30) concludes from a study of a failure class of 34 in algebra that there is a relation between failure in algebra and a low grade of intelligence and that such classes are a waste of public-school funds.

H. J. Smith (16) has made a survey of the mathematics courses and requirements in industrial and vocational secondary schools.

4. SPELLING AND VOCABULARY.

In spelling and vocabularies we again find that research has reached the point when texts based on the results of research have begun to appear. Such texts are Horn and Ashbaugh's study (7), based on 11 investigations of correspondence (1) and graded as to difficulty (2) by actual study; the Test and Study Spellers by Starch and Mirick (20), whose vocabularies are selected on the basis of well-known spelling investigations; Jones (8), junior high-school writing vocabularies, based on 75,000 themes of 2,050 pupils; Thorndike's (21) work-book, which is an alphabetical list of the 10,000 most widely used words determined by a count of 4,656,000 words from 41 different sources, among which are correspondence, children's books, school texts, and other books covering a wide range of interest to be used as a check on what words a child should know, not as a speller; Kimble's (10) vocational vocab-

ularies for stenographers and court reporters: and Pryor and Pittman's (18) guide to the teaching of spelling, in which the methods and devices recommended are based on the principles formulated by scientific researches.

Further studies as to content have been made by Clarke (5), who, from a comparison of newspaper vocabularies, Ayres list, and the *Everyday Speller*, concludes that the present lists are inadequate because insufficient regard has been shown to geographical and social factors; by Capps (4) and Lester (11), who have worked on a high-school spelling course by collecting misspelling; and Briggs and Kelley (3), who have supplemented the Ayres list by securing the second and third thousand words most frequently used in correspondence.

Woody (2) has evaluated the subject matter in several spellers by comparisons with the scientifically derived lists.

Lester (13), in comparing lists of words commonly misspelled, calls attention to the discrepancies which may be due to differences in opinion as to what constitutes a misspelling. He has also made a study (12) of misspellings in college entrance examinations to determine how much simplified spelling really would simplify, and finds that only two rules would obviate a high percentage of misspellings. He suggests that these two rules and these alone be proposed for adoption. The board of education in Newark, N. J., (16) has published a very complete study of a spelling survey, giving their results by grades, schools, nationalities, and intelligence ratings with the Ayres and Newark standards.

Hawley and Gallup (6) report a study on the list versus the sentence method of teaching spelling and found no advantage in the latter. Morton (15) in five Ohio cities studied the sentence versus column tests and found the slight increase in correlation does not justify the extra expenditure of time and energy required for timed-sentence tests. Peters and McClure (17), from a study in written versus oral spelling in both study and recitation, conclude that the written method is preferable for the majority of pupils—about two-thirds doing better by the written, and one-third doing better by the oral method. They urge that future experimenters with method display their results in such a form as to indicate whether the method proves superior on the average, is somewhat better for all, or only better for some of the group while it is worse for the minority. If the best method proves to differ for different pupils it may be necessary "to segregate our pupils according to the forms which they learn best in addition to, or perhaps instead of, our present segregation on the basis of general intelligence." Wolfe and Breed (23) report a study of syllabification in teaching spelling, in which they found it pro-

duced slightly better results, especially with younger children. Wessem (22) reports the improvement of the spelling ability of university underclassmen by having them list their own misspellings as marked by their instructor of study.

Martin (14) describes an individualized method of teaching spelling, which was tried in grades four and five, in which a review and trial lesson of the week's work was given each Monday to determine which words each child needed to study and a weekly test on Fridays to check results. Richardson (19) gives an account of a "spelling campaign," in which the experimental groups eliminated 53 per cent of misspellings as against 10 per cent eliminated by the control groups.

Two experiments in word study are reported: One by Henmon (6a) to determine the outcome of a word-study course which appears to be of value; the other by Kellogg (9), an experiment to increase vocabulary by giving upper class high-school students two or three new words each day, which was also successful.

5. ENGLISH.

In English, the most elaborate study is that by Hudelson (5), reported in Part I of the Twenty-Second Yearbook of the National Society for the Study of Education. It deals with the aims and methods of teaching composition. Some of his conclusions as to aims and methods are: "That equal or nearly equal time is being spent in composition and literature; that rhetorical principles receive most emphasis; most use is made of and best results obtained from biweekly themes; errors and weaknesses are seldom corrected by the teacher except in matters of taste, and in questions demanding nice judgment or involving unfamiliar principles; and that English teachers recognize practically no fundamental functioning relation between oral and written composition." The aims set forth in the United States Bureau of Education Bulletin No. 2, 1917, are generally accepted and followed. Points considered by teachers as the most serious defects are lack of clearness, incomplete sentences, structural weaknesses, punctuation and capitalization errors. Misspellings are frequently undetected, and no distinction is made between spelling differences. Hudelson also presents new scales for measuring abilities in composition.

Wohlforth (12) and Malroney (13) have published a series of English texts containing drill lessons based upon scientific findings as to language errors and spelling weaknesses. Brown (2) has published an interesting compilation of 28 lessons on the technique of compositions chosen from the writings of successful authors. McGregor (9) has published a text on supervised study in English which

contains many sample lessons reported from the practices of the English department of the Washington Junior High School at Rochester, N. Y. Many assignments are worked out on the basis of minimum, average, and maximum difficulty. Project teaching and socialized recitation were used.

Heckert (3) reports an experiment in supervised study in English in the ninth grade which resulted in greater improvement on the part of the supervised group over that made by the nonsupervised group. Jordan (8) reports an experiment in 10 New Hampshire and Vermont high schools in which it was found that the comprehension by students of ordinary reading matter was low, but developed throughout high school, and that errors in composition decreased from year to year until the senior year when the number increased again, perhaps due to the greater stress laid upon literature in that year.

Correlations of language abilities have been calculated by Jamison (6), Van Wagenen and Kelly (10). Jamison found an apparent positive correlation between the abilities required for language and written composition. Van Wagenen and Kelly found low correlations between various language abilities and college marks and a correlation of $+0.52$ between the abilities in reading and composition.

Studies as to content of English courses have been reported by Hill (4), Johnson (7), and Wilson (11). Hill's report is a description of a course in community life English tried out in the University of Chicago laboratory school. Johnson's aim was to establish clear objectives in letter writing. He analyzed 150 "good" letters from the correspondence files of well-known women, several modern collections of literary letters, and 1,000 letters from women of approximately college freshmen standing. The "good" letters were characterized by courtesy, informality, humor, optimism, judgment, few centers of organization, and correct form. The student business letters showed errors more frequently than the social letters. The latter were characterized by optimism, crudeness, "newsiness," lack of organization, too much focusing on self, and inferior humor. Wilson makes a comparison of five studies of language errors of children. He concluded that the list common to different localities is very small, and did not find much difference by grades nor in oral and written lists. Verb errors made up 50 per cent of all and the errors were specific and could not be corrected by rules.

Bamesberger (1) has studied the standard requirements for memorizing literary material by means of a comparison of 50 city school courses of study. Her results are given in lists of poems according to frequency and by grades, a preferred list for study in which Atherton's list was also considered, lists of memory gems, Biblical material, and prose selections.

6. SPEECH.

Merry (2), in his report of the research committee of the National Association of Teachers of Speech, gives an excellent survey of the nature of research in speech education.

Some of the published studies in this field include: A survey of speech training in high schools of the United States, with recommendations for its improvement by Williams (5); a study by Woolbert (6) on the effects of the various modes of public reading; and three studies on corrective speech by Anderson, Starr, and Stinchfield.

Woolbert's study led to the conclusion that extreme change in all four attributes—pitch, time, quality, and intensity—appeared to the better rate, regulation of pitch changes appearing to be especially significant.

Stinchfield (4) reports a very high incidence of speech defects. In a study of 113 elementary school pupils, 93 had functional disturbances of speech, and 45—some of these the same—had organic speech defects. She gives a detailed classification and analysis of defective speech conditions, and causes of speech disorders. She also reports two type cases in which the speech was improved, and describes the materials used in the corrective methods.

Anderson (1) reports an experimental analysis of the causes of stuttering carried on by a series of tests used with "normals," ex-stutterers and stutterers. The results showed characteristic differences in hand coordination and memory span for movements. Stutterers had fewer partially inhibited responses. Ex-stutterers were unusually irregular in complex reaction time. Rapidity and regularity of tapping and disturbance in type of hand coordination seemed to be associated with improvement in stuttering.

Starr (3), by means of about 1,300 salivary analyses and psychological diagnosis judgments, found that 73.7 per cent of stammerers were subbreathers with a salivary P.H. considerably below normal; 15.4 per cent were distinctly psychopathic with a salivary P.H. above normal; and the others were hyperexcitable or combinations of the other types. Speech could be improved by treatment directed to improving these causes.

7. FOREIGN LANGUAGES.

In the field of foreign languages almost all the research has been in Latin, most of the research in this field being motivated by a desire to prove its worth.

Two brief studies have been made in the general field of foreign languages. Franzen (5), in 1921, made a survey of the enrollment

and courses offered in foreign languages in Iowa's secondary schools. He found Latin enrolling five times the number studying other languages, with French second, Spanish third, and Norse enrolling a few. Cook(4) has ranked as to relative importance the Romance languages, English, and Russian, according to the criteria of the number of people using each language, territorial possessions of countries using it, official recognition by government, and its dynamic quality and importance as a vehicle of thought.

Morrison (9) and Webb (14) have made studies of methods that bear on learning a foreign language. Morrison's study was a comparison of scores on prepared lessons in Latin or French translation and sight reading. Eleven, out of 67 students studied, made as good or better scores at sight as in prepared work. From his study he concludes that transfer from lesson learning to capacity is very uncertain and occurs in a small percentage. Webb reports a comparison of two methods of study—recall or study, in learning paired associates. He found 65 to 76 per cent of his subjects retained more and 16 to 24 per cent less by the recall method. Writing down the paired associates helped 57 per cent and hindered 38 per cent.

In Latin many of the studies have centered around the investigations being carried on by the American Classical League (3) (7), with the support of the General Education Board, in order to determine "to what extent the objectives commonly claimed for Latin are attained" and what content and methods are most favorable.

Newcomb (10) reports one phase of this investigation, namely, a comparison of the Latin and non-Latin groups in high school. In a study of 3,000 pupils in 85 schools, 65 per cent of the Latin group exceeded the non-Latin in intelligence, 57 per cent in reading ability, 68 per cent in knowledge of grammar, and 71 per cent in word knowledge. He found conditions varied widely in different schools and that the Latin pupils were a very heterogeneous group, but were the superior, on the whole, though not so much as has been supposed.

Brown (1), in a study of 29 Wisconsin schools, shows that very little progress in knowledge of Latin is made in the upper years and very little knowledge is gained in any year. Schools placing the chief emphasis upon formal grammar in the first year and later shifting to rapid translation gave the best results. Odell (11) studied 1,000 errors in Latin prose composition. He found that one-third of all errors are caused by lack of mechanical memory, one-fourth by lack of reasoning power, and nearly one-half to carelessness. Errors in declension comprised one-third, in conjugation one-fourth, in order 12 per cent, and in analysis 9.5 per cent.

Several studies of Latin in relation to English vocabulary are reported, one of which also attempts to show the value of Latin in

English composition and grammar. For this last study, Otis (13) paired 42 Latin pupils with 42 commercial pupils on the basis of intelligence and school grades. The Latin pupils showed slight superiority in composition and marked superiority in defining words. This increased power in English vocabulary on the part of students of Latin is found by all investigators reporting. Orleans (12), by the method of judgments, determined the possibility of transfer value of 2,000 words in the Thorndike word list.

Gilland (6) found a steady increase in the ability to define words with the number of years of study of Latin on the part of 115 college freshmen.

Carr (2), from the study of the reports of 7 high-school freshmen classes, concludes that during the school year the Latin pupils gain more than the non-Latin pupils in vocabulary; he thinks such transfer of training to the field of English vocabulary depends largely upon definite instruction and training in the technique of derivation.

West (15) reports a controlled experiment in the teaching of English derivatives from Latin, which was started in February, 1922, to be carried on for at least three semesters. Four groups are to be studied, two each of Latin and non-Latin classes. In one of each section definite training in etymology will be given.

Grinstead (8) found that a year's course in Latin is of value when emphasis is especially laid on etymology.

8. VOCATIONAL SUBJECTS.

Most of the studies in industrial arts, manual training, and home economics are in form of surveys (3, 9, 15, 20). The Bureau of Education (5) publishes a bulletin in reorganization of home economics in secondary schools. The most complete of the surveys in home economics is by Rugg (22), in collaboration with the departments of home economics at the University of Chicago and Iowa Agricultural College. It includes a study of existing courses, an analysis of texts, a study of literature on the subject to determine definite aims and objectives, and preliminary tests in the subject.

At the Teachers College, Columbia University, there is a class in investigation in cookery. Accounts of two of their experiments in pressure cookery (19) and the making of ice cream (18) have been published.

Newman (21) describes an experiment in a course in metal working presented by problematic question-lesson sheets.

Foulkes and Diamond (9) have made a study on the adaptation of courses in manual training to community needs and interests. They studied the uses the boys made of their training outside of school

and found the fifth and sixth grade boys made mostly articles for home and kitchen and toys, and furniture became increasingly popular from fifth to eighth grade.

Fuller (10) suggests a course in manual arts based on home repair and gives a classified list (according to frequency) of jobs found and lists of the tool processes, necessary to perform the jobs.

Two studies, one by Charters and Green (4), and one by Dyer (6), have been made on home-project work in agriculture. Dyer's is a study of prevailing practices in the North Central and Northeastern States. The other is a detailed study of the factors in efficiency of the boys' and girls' clubs. Some of these factors are a formal organization, frequent meetings, making reports and exhibits, memberships of 7 to 15, and, perhaps, a comparatively narrow age range of members.

Two bulletins on training for retail selling have been published. One (7) is based on a study of the vocational history of 5,000 juvenile workers in Boston's retail stores, made by the director of the Woman's Educational and Industrial Union, while the other is a description of the retail selling course in Pittsburgh high school (17), carried on as an experiment by the Carnegie Institute of Technology's Research Bureau, for retail training with the cooperation of the public schools and merchants.

Three studies on the present status of engineering courses are reported, one by Ayers (1), and two in Government bulletins (11, 14).

Hoke (13) presents a study in the improvement of speed and accuracy in typewriting by means of determining the relative frequency of the different characters on the keyboard and of errors. Correlations were found between infrequency of use and frequency of error. The relative abilities of each finger were studied. The author concludes that greater speed and accuracy would result from a rearrangement of the keyboard on principles underlying the touch method and a redistribution of finger loads.

Barton (2) has studied the relative value of using small or large units in learning to typewrite. His results are somewhat in favor of the larger unit.

Two books in a more general field of vocational education are: Hill's Introduction to Vocational Education (12), which treats of such subjects as education for the mechanical trades and industries, applications of psychology to instruction and adjustments of the individual and society; and Lyon's Education for Business (16), which presents a study of business operations and processes and applications of science to such.

9. SCIENCE.

General science seems to have the place of first interest in science, doubtless due to its comparatively recent entrance into the course of study. Most of the science studies, moreover, have taken the form of surveys as to the status of the subjects (3, 4, 8, 9, 15).

As to content of the courses, Webb (16) has made a study to determine the adaptation of general science in grades six to eight, and has also analyzed quantitatively the texts commonly used in general science. Stevenson (14) presents a list of minimum essentials in place geography based on the ranking of various items (e. g., rivers, capes, mountains, and lakes) by 55 experts. Branom (2) has made a study of what the business world demands of geography by means of a questionnaire. Some of his conclusions are that the subject is of importance, but too many high-school graduates and even college students have but a poor knowledge of the subject. More emphasis should be placed on the study of South America, Asia, and Oceania. A course in commercial and industrial geography in the eighth grade is desirable and less attention should be paid to minor problems.

Barthelmess (1) draws conclusions as to facts that pupils should know in geography from extensive testing carried on in Boston.

Finley (6) approaches the matter of content in general science through a two-part study of children's interests in science material, studying 1,716 children in grades 1 to 8. The first was an attempt to discover the true nature of the interest of children in animals. The method used was to present a salamander to the class who, after three minutes of silent observation, wrote down or whispered to the teacher the questions they would like to have answered about the animal. The questions asked were classified as to type of interest shown, and the differences from grade to grade were noted. Identification, environment, and food caused considerable interest; the life history, habits, and structure were other interests, the last two strongest in grade 4; and in grade 2 the teleological interest was strong. In the second part of the study, the investigator tried to find out which interested children more, plants, animals, or physical phenomena, by presenting the black skimmer, life-plant, and pendulum to the classes in an 8 or 10 minute talk followed up the next day by having the pupils write on their choice of the three. In 22 classes the bird was the most popular, in two the plant, and the pendulum in one.

Powers (13) reports a comparison of the achievement of high school and university students in chemistry, in which it was found that the difference between students who have taken chemistry in university freshman classes and those who have taken it in the

better high schools is small and both do better than those from small high schools. He gives in detail the types of tasks in which each group excelled.

Finley and Caldwell (7) have made an attempt to determine the types of information in biology which the public is now receiving. They studied articles bearing on the subject and classified the references. The articles found belong to eight main topics: Health, animals, plants, food, organizations of producers, evolution, nature, and fictitious. Only one-fourteenth of the articles are on the last four topics. The authors conclude that "since these types of biological knowledge are given to the public in such large quantities and over the whole country, the course in school biology should consider them as part of the foundation upon which to proceed in constructing a course of study."

On methods in teaching science, we have four studies. Bryson (5) found diagrammatic drawing increased the retention and recall of information in college and high-school classes. Phillips (12) concluded that laboratory experiments were no advantage over demonstration in teaching a law of physics but were of value in "familiarizing pupils with apparatus and method of procedure"; and that notebook recording was of value in making information more definite. Kiebler and Woody (10) also found the demonstration method secured as good results as the laboratory method, except in especially difficult experiments, and had the advantage of saving time. Meister (11) reports an attempt to measure the educational value of play with scientific toys which he found to be of decided value.

10. MUSIC AND DRAWING.

Very little has been done in the field of fine arts. In music, the outstanding contribution is Seashore's (8) survey of the musical talent of children in Des Moines public schools, using tests for sense of pitch, time, intensity, consonance, and tonal memory with comparisons with teachers' ratings in brightness, singing, rhythm, and amount of musical training the children had received. He has established norms for the fifth and eighth grades, standardized methods, apparatus, and technique, and presented principles for the discovery and conserving of musical talent. His study is the beginning of the development of a science of vocational and avocational guidance in the field of music.

Two brief studies of disabilities in music are reported, one by Kern (6) on the corrective treatment of a group of monotones, the other by Gaw (3), a study of 24 normal-school pupils who were unsuccessful in the study of music.

Feleky (1) has published a text on *The Musician's Mind*, in which she summarizes the replies to a questionnaire of 100 musicians and composers as to type of imagery, methods of learning and teaching, and effects of various factors on performance.

Frampton (2) conducted a questionnaire to determine what courses in music are offered by college extension departments and the U. S. Bureau of Education has published a bulletin on the music departments of libraries (10), and another on the present status of music instruction in colleges and high schools.

Hutson (4) and Scott (7) report surveys in a Minneapolis and a Massachusetts high school on the musical training and desires of high-school seniors, from which they conclude that there is a comparatively universal desire for music expressed in different ways and tastes, but that the students are handicapped in acquiring a musical education by its expense, lack of time, and argue for the educative value of music. Scott proposes a program for music in high schools.

Taylor (9) has published a text on the *Psychology of Singing*, dealing with modern methods of instruction, vocal science, and practical voice culture.

In drawing even less has been done. Whitford (11) gives a synopsis for planning courses in the different grades, based on data sheets submitted to 50 experienced teachers and supervisors of art who were asked to check the value of five art elements and of different types of art commonly taught in the public schools.

Jones (5) has made an attempt to discover the nature powers peculiar to children who have art ability through tests given to seventh and eighth grade children, and a questionnaire sent to over 200 artists. The conclusion appears to be that art ability and aesthetic appreciation are closely linked, and that the tests of visual memory and perception of perspective showed high correlations with drawing ability.

11. KINDERGARTEN.

Loeb (1) describes a little experiment in a public-school kindergarten to determine what materials and games children will choose voluntarily and what products result from their own planning. The Bureau of Education issues a bulletin (2) on a kindergarten-first-grade curriculum that is a composite product of 26 leaders in that field.

12. SOCIAL STUDIES.

Social studies in the curriculum are undergoing a decided change in form and content. Thus we find a number of surveys (9, 10, 14, 17, 18, 21, 22) as to their present status, some including all and others

only one of them, and covering all years from intermediate through college.

Experimental courses in high school are reported by Minor (13) on Current Events and Problems; by Shideler (19) on Modern Social Problems. Three experiments in the application of civic education or civic training are described: One by Coe (6), tried at Grafton, the results of which were checked by association tests and a control group; by Cheney (5), who describes the Lawrence plan for education in citizenship; and an experiment tried in the San Francisco Normal School (3), in which the special feature was a discussion by the children of social situations presented to them.

Tyron (23) has analyzed five texts in world history as a basis for a one-year course in world history. Dodd (11) has listed the historical references in the poems required for entrance to the University of Illinois as an aid to coordination between history and English curricula.

Studies in method in teaching history are reported by Rugg (16) on supervised study; by Beatty (4) on the use of pageantry and ritual; by Wilgus (25) on the laboratory method; and by Hatch (12) on the project method.

Voelker (24) has studied the function of ideals and attitudes in social education. Using the ideal of trustworthiness as the objective and devising tests of trustworthiness for measures, he studied the effect of training by methods similar to those used in the training of Boy Scouts. He had two experimental and two control groups. The experimental groups gained 13.5 per cent and 9.9 per cent; the control groups failed to improve.

But the best collection of studies in this field is to be found in the Twenty-second Yearbook of the National Society for the Study of Education (15). Chapter I in this book covers the situation and the need. Harold Rugg, in his chapter on "Do the Social Studies Prepare Pupils Adequately for Life Activities?" answers no and indicts the present scheme on the inadequate materials and insufficient provision for pupil activities. Judd argues for the junior high school as the favorable point for the introduction of the social studies. Marshall presents the proposal for the social-study curriculum of the commission of the Association of Collegiate Schools of Business (7, 8), which is set forth on the basis of the consideration that the organization of social studies should be in terms of the purpose for their introduction with consideration for vocational needs and in terms of the psychology of learning. Earle Rugg in chapter 4 discusses how the social studies curricula came to be what they are. Chapter 2 describes eight types of reorganized courses in social science being tried out in different schools, elementary, high and college. Chapter 3 tells how the new curricula are being con-

constructed. Washburne, in chapter 12, describes the Winnetka social-science investigation. By the examination of about 15 issues of each of 18 periodicals of various types 81,434 allusions to historical or geographical facts were found, which were then classified and ranked according to periodical year frequency. Horn reviews different methods of research that have been used in scientific determination of the curriculum of history. Harold Rugg reports an investigation by means of the analysis of representative books in the social science field from which a course is drawn up based on the statements of contemporary problems and issues found in these books. Harap illustrates a method of curriculum revision which requires the cooperation of expert psychologists, administrators of education, and sociologists by means of first ascertaining present economic habits, comparing these with scientific standards of good living and social axioms of universal acceptance. Chapter 4 by Frank McMurray is a critical appraisal of the proposed reorganizations. The appendix contains a bibliography and a statistical representation of facts as current courses.

Alderman (1) has contributed to the content of civics courses a study of the various causes of litigation on the docket and the petitions filed in the district court of Johnson County, Iowa, in order to ascertain what an Iowa layman should know about courts and laws.

Almack (2) has listed measures submitted to voters through initiative and referendum in order to determine what civic problems should be studied.

Snedden (20) discusses the problem of methods for finding the objectives of civic education. He favors the method of "type-group" analysis. As examples, Professor Snedden gives 11 representative type-group studies made by his seminar. These not only illustrate the method but are themselves suggestive through their content.

13. MORAL EDUCATION.

The Character Education Institute award of a \$20,000 prize for the best plan for moral education was won by the Iowa Plan (1), which points out ways of securing moral results from the regular studies and school organizations by the use of problems and projects. The book includes rating scales and bibliographies.

Shepherd (33), who has made a study to determine the importance of different factors on the religious ideas and beliefs of children, concludes: (a) Education has been a very important factor; (b) social environment has been an influence; (c) children's confidence in others has been a very important factor; (d) authority has been concerned; (e) thought has been concerned; (f) the confidence

shown has been like that of primitive man in gaining his religious ideas; (g) the writer believes that these conclusions apply in greater or less extent to the religious ideas and beliefs of children of other ages than 8 to 13 years.

Everyday Manners, a book published by the faculty of the South Philadelphia high schools (2) for girls, is a result of a special study by a committee of students and teachers and discusses manners in the home, school, in public places, in business, and gives suggestions as to methods.

XVII. HEALTH.

The importance from the standpoint of education of the correction of physical defects and improvement of health is shown in studies by Mallory (14), who studied the relation of physical defects to school progress. He found a direct relation between low scores and physical defects. Ranked as to degree of handicap the defects are: (a) Nasal obstruction, (b) defective teeth, (c) defective hearing, (d) defective tonsils, and (e) defective eyes. Sandwich (22) compared the number of physical defects of children making high scores in intelligence tests with those making low scores. Rogers (20) studied the effect of adenoids and diseased tonsils. Six months after operation little improvement was shown, but after 12 months the test group had gained double what the control group did in weight, slightly more in height and also in speed of tapping, but no difference in grip, I. Q., or Healy test. Mason (15) describes a method tried at Lincoln School for reducing absences by keeping record of the number and causes of absence and requiring pupils to report to the school physician after absence from any cause. The result is that absences have fallen from 14.9 to 9.3 per cent. Todd (23), whose study was of high-school boys, suggests a curriculum and program providing time for corrective work in physical education.

Standards of growth have been studied by Baldwin (1), who has made an exhaustive study of the Physical Growth of Children; and by Packer and Moehlman (18), who have found standards for Detroit children by sex, age, and nationality. Both of these writers have studied the relation of growth to school progress and found it positive.

Several studies in reducing malnutrition are reported. In Kansas City (3) all children were weighed and measured three times a year and the findings used as a basis for teaching of hygiene, accessory feeding of underweight children, and other follow-up work. Results: 30 per cent underweight reduced to 19 per cent.

Ennis (5) found 15 per cent boys and 20 per cent girls in Evanston, Ill., to be 10 per cent or more underweight. The study is reported by schools.

Mudge (17) reports a 12 weeks' experiment with two groups of children which included educational, nutritional, and health work.

The United States Bureau of Education (6) has a bulletin on malnutrition and school feeding.

Mitchell and Forbes (16) report an experiment in nutrition classes in a New York City boys' school. But the most complete experiment in this line is reported in Health Education and the Nutrition Class (11) where various groups of children who were underweight were studied during three years. The remedial measures attempted are described. Attention is called to the effect of seasonal variation in gain in weight in comparing results. The authors also conclude that "the definition of malnutrition as a function of the height-weight relationship with the acceptance of a 7 per cent standard is not justified."

On hygiene of the eyes we have a United States Bureau of Education bulletin by Berkowitz (2), who presents a summary of facts concerning eye defects, lighting systems, arrangement of desks, blackboards, and other problems of the hygiene of vision; and a study by Wager (25) on a method for measuring the fatigue of the eyes by the speed of shifts in fixation varying distances. He found ocular powers ranging from a high resistance to fatiguing conditions to a ready susceptibility.

W. L. Holt (10) studies the effects of smoking on freshmen. He found fewer nonsmokers underweight, more of them on athletic teams and on honor list, and their grade average was 4.1 points higher than the smokers. Vaughn (24), in a tobacco survey of high-school boys, also found nonsmokers doing better work.

In accident prevention we have a United States Bureau of Education bulletin by Payne (19).

In physical education, Williams (26) has published a text on its organization and administration; Williams, Atkinson, and Brace (27) describe an experiment to determine the relative value of formal gymnastics and play in the fourth grade. The play group gained more in skill and alertness, obedience, height, weight, lung capacity, and heart condition. In strength and chest expansion the groups were about equal, and the formal group made slightly more improvement in posture.

In athletics, Gilchrist (7) gives ratings and suggests norms for boys and girls in track and field events. Kunkel (13) has studied the effect on enrollment of a winning football team and concludes that its advertising worth has been much overestimated.

The Cleveland Foundation (9) has made a recreation survey and made comparisons between school progress and spare-time activities.

In the matter of Sex Education we have a study by Gruenberg (8), which deals with its importance, methods, correlation with different subjects in the curriculum and preparation of teachers for this purpose. Hunter (12) tells of an experiment at Carleton College on movies in teaching social hygiene. Edson (4) reports a survey of the status of sex instruction in which a rather widespread belief in its need was found; the ratio of schools responding to questionnaire that gave sex instruction to those that did not was 11 to 16. The topics treated and subjects used as media for presenting phases of sex education are given.

Salisbury (21) has studied the legislative provision for physical education in different States and found 11 had good provision for it by laws, 9 others had mandatory and 3 more had permissive laws.

XVIII. VOCATIONAL GUIDANCE.

The present status of vocational guidance has been studied by Maverick (9) in Massachusetts, by McDougall (8) in 130 high schools, and by Edgerton (6) in 379 junior high schools.

Cowdrey (2), Proctor (12), and Vance (15) have studied the value of mental tests in vocational guidance. Proctor believes they are to be used along with teachers' estimates of ability, records of school success, and vocational ambitions of the pupil. His suggestions are mainly of a negative kind. Cowdrey calculated correlations between the different trades taught in the Whittier State School with mental and chronological ages and intelligence quotient, and computed critical upper and lower mental age levels for success. He found in no group success was wholly dependent on intelligence and that different trades were of three types where success was dependent on mental level, where the relationship was negligible, and where the work was better adapted to low levels of intelligence.

The use of mental tests in guidance of pupils in selection of high-school courses is discussed by Dickson (4) 1920, and Weisman (16) 1923, and Powers (11). Remming (13) obtained answers from 93 high-school students as to the reasons why they chose subjects, and urges that students be given more instruction as to what different subjects treat of in order that they may choose more intelligently.

The vocational interests of high-school seniors of the State of Washington was studied by Douglas (5). He found more girls and boys from large schools planning to enter business and more girls from small schools teaching, and more boys agriculture. On the whole, too many boys planned to take up engineering or law and too few agriculture and the ministry. Very few were choosing because of fitness and 58 per cent did not expect to remain permanently in the lines of work in which they would immediately engage.

Crathorne (3) has studied the change of mind between high school and college as to life work. He found that about one-half of the 57 per cent who entered high school with an occupation in view had changed their minds by the freshman year at college. He gives the results by occupations and sex. Miner (10) describes an experiment in helping high-school students to observe their own vocational interests by filling out blanks which analyzed and summarized interest bearing upon vocational satisfactions and classifying the occupations according to the types of activities employed.

In 1920 the recreational, reading, and vocational interests of 800 girls 6 to 20 years old were studied by Wheeler (17). He found a very limited range of vocations known to the girls.

A guide to the study of occupations in order to assist in vocational guidance has been published by Allen (1) and Freyer (7). It gives two tables of intelligence standards for 96 occupations based on the Army studies and verified by studies of the Central Branch Y. M. C. A. of Brooklyn. Thorndike and Symonds (14) have compared the occupations of high-school graduates and nongraduates.

XIX. SELECTED SURVEYS.

During the past two years school surveys have become less frequent and more specialized in type. At least 14 States have conducted surveys of scientific significance on curricula, buildings, finance, supervision, high schools, teacher training, and rural schools. A number of mental surveys have been started and a few completed.

ALABAMA.

Brenner, Thomas E. A comparative study of the elementary schools white and colored, of the 67 counties of Alabama. Montgomery, Ala., Brown Printing Co., 1921. 14 p., charts, tables.

ARKANSAS.

U. S. Bureau of Education. The Arkansas survey report (abridged). Little Rock, Ark. [1922]. 83 p. (Journal of the Arkansas Educational Association, vol. 6, nos. 3-4, July-October, 1922.)

CALIFORNIA.

Hart, Frank W. A school building and school housing program for Napa, Calif. Berkeley, Calif., University of California, 1921. 64 p., tables, charts, maps. (Dept. of Education. Bureau of Research. Study 2.)

— and Peterson, L. H. A school building survey and school housing program for San Rafael, Calif. Berkeley, Calif., University of California. (Dept. of Education. Bureau of Research. Study 8.)

McNaught, M. S., and Richards, E. M. Report of the survey of schools of Nevada County. Sacramento, Calif., California Board of Education. (Bulletin no. 28.) 23 p.

Williams, J. H. A survey of the pupils in the schools of Bakersfield, Calif. Whittier, Calif., Whittier State School, Dept. of Printing Instruction. 1920. 43 p.

COLORADO.

(City and County of Denver, Colo.) School District No. 1. Sixteenth annual report for the year ending June 30, 1919. Denver, 1920. 278 p., illus.

Fruita, Colo., Board of Education. An educational survey of the Fruita (Colo.) Union High School District, including school districts Nos. 2, 7, 23, 25, 27, and 37. 1921. 111 p.

The rural high-school district includes social and economic survey.

CONNECTICUT.

Davis, Jesse B. A survey of the organization and administration of high schools in the State of Connecticut. Hartford, Conn., State Board of Education, 1921. 37 p.

Southington, Conn. School Board Annual Report, 1922. 69 p.

Part 1 deals with a health survey. Part 2, the superintendent's report; includes educational tests. Part 3, finance.

DELAWARE.

U. S. Bureau of Education. Survey of the schools of Wilmington, Del. Bulletin, 1921, no. 2. 132 p.

FLORIDA.

Roemer, Joseph. A study of Florida high schools. Gainesville, Fla., University of Florida, Dept. of Secondary Education, 1921. 29 p., tables.

GEORGIA.

Duggan, M. L., and Bolton, E. B. Educational surveys of various counties in Georgia. Atlanta, Ga., State Department of Education, 1921-22. Nos. 27-38. 554 p.

Twenty-seven, twenty-eight, and twenty-nine by M. L. Duggan only.

Fernandez, Alice B. A school building program for Athens, Ga. U. S. Bureau of Education. Bulletin, 1921, no. 25.

Strayer, George D. Report of the survey of the public-school system of Atlanta, Ga. (School year, 1921-22.) New York, Columbia University, Teachers College, Institute of Educational Research.

Survey made by Division of Field Studies.

HAWAII.

U. S. Bureau of Education. A survey of education in Hawaii. Bulletin, 1920, no. 16. 408 p., illus., tables.

Gives data regarding races, population, occupations, administration, finance, task of Americanization, and status of education.

IDAHO.

Sears, J. B. The Boise survey. Yonkers, N. Y., World Book Co., 1920. 290 p.

Administration, organization, staff, curriculum, progress, and health.

INDIANA.

Book, William F. The intelligence of high-school seniors. New York, Macmillan Co., 1922. xviii+37 p.

KANSAS.

University of Kansas. Extension Division. School survey of Lawrence, Kans. Bulletin, vol. 23, no. 1, Jan. 1, 1922. 100 p., illus., tables, charts.

KENTUCKY.

- General Education Board (N. Y.). Kentucky Educational Commission. Report on public education in Kentucky. New York, 1922. 1x+213 p., illus., charts, tables.

LOUISIANA.

- U. S. Bureau of Education. Survey of the schools of Caddo Parish, with special reference to the city of Shreveport, La. Baton Rouge, La., State Department of Education, 1922. 138 p., incl. tables.

MAINE.

- Augusta, Me. Board of Education. Report of the survey staff. Augusta, Me., Kennebec Journal Print Shop, 1922. 242 p.

MARYLAND.

- General Education Board (N. Y.). Maryland Educational Survey Commission. Public education in Maryland. New York, General Education Board, 1921. 230 p., illus., charts, tables.
- Strayer, G. D. Abstract of a survey of the Baltimore public schools, 1920-21. Baltimore, Md., Board of School Commissioners, 1921. 54 p., front.
- and others. Baltimore school survey. 2 vols. Baltimore, Md., Public Improvement Commission, 1921-22.
- Vol. 1, The schoolhouse and school building program. (1921.)
- Vol. 2, The administration of the public schools and other studies. xiv + 302 pp., tables, diagrams. (1922.)

MASSACHUSETTS.

- Spanning, Frank E. Principles, policies, and plans for the improvement of the New Bedford public schools. New Bedford, Mass., School Commissioners, 1922.
- U. S. Bureau of Education. A survey of schools in Winchester, Mass. Bulletin, 1922, no. 43. 103 p.
- School building program for Gloucester, Mass. Bulletin, 1920, no. 23. 16 p.

MICHIGAN.

- Detroit, Mich. Department of Special Education and Bureau of Statistics and Reference. Age, grade, and nationality surveys. Research bulletins, no. 2, Dec., 1920, 24 p., and no. 7, Jan., 1922.

MINNESOTA.

- Neale, Mervin G., and Severson, Sigurd B. A school building program for the city of Winona, Minn. Minneapolis, Minn., University of Minnesota, 1922. 26 p., graphs, tables.
- Sears, J. B., and others. The Arlington school survey. Minneapolis, Minn., University of Minnesota, 1921. 58 p., graphs, tables, field maps. (Bulletin, vol. 24, no. 28.)
- Part 1 reviews school problems; Part 2, gives data and comparisons; Part 3, remedy.

MISSOURI.

- Moore, Elizabeth. Rural school health survey. Saint Louis, Mo., Missouri Tuberculosis Association, 1922. 46 p.

NEBRASKA.

- Olsen, Hans C. A study of educational inequalities, being a survey of certain aspects of public education in Buffalo County, Nebr. Kearney, State Industrial School Press, 1921. 163 p., front, maps.

NEW JERSEY.

Report of the survey of the public-school system of Lawrence township. Mercer County, N. J.

Women's Club of Orange, N. J. Report of the study of the school systems of East Orange, Orange, South Orange, and West Orange. Orange, N. J. Chronicle Publishing Co., 1922. 48 p., incl. diagrams.

NEW MEXICO.

Bagley, W. C. Report on the New Mexican State educational unit and the general educational system of New Mexico. Santa Fe, New Mexico Pub. Corp., 1921. 62 p.

NEW YORK.

Butterworth, Julian E. Rural school survey of New York State. Ithaca, N. Y., Joint Committee on Rural Schools.

Condition of school buildings.

Eaton, Theodore. Rural-school survey of New York State. (Vocational education.) Ithaca, N. Y. 293 p.

Haggerty, M. E. Rural school survey of New York State. (Educational achievement.) Ithaca, N. Y. 1922. 223 p., diagrams, tables.

New York (State) University. Survey of Livingston County schools. Albany, N. Y., 1922. 143 p., illus., tables, charts, diagrams, maps, plans. (Bulletin no. 738.)

Updegraff, Harlan. Rural school survey of New York State. (Financial support.) Ithaca, N. Y., 1922. 233 p., diagram, tables.

Works, G. A. Joint committee on rural schools. A report to rural school patrons. 1920. 272 p., illus., tables, charts.

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CHAPTER XXII.

EDUCATIONAL TESTS.¹

By STEPHEN S. COLVIN.

CONTENTS.—The development of mental testing—The Binet tests—Army Alpha tests—Army Beta tests—Recent group tests.

A decade ago intelligence testing was in its beginnings in the United States. There were no standardized tests available except those of the Binet-Simon scale. These tests had been used but little, and chiefly for the detection and classification of the backward and the feeble-minded. Goddard had just begun pioneer work in this field, while Kuhlmann and Huey had added to the scant literature that was just beginning to appear in this country. Altogether the important articles numbered scarce a score. The point scale of Yerkes had not yet been published, Terman's important revision was still in the process of making, while group tests to measure the mentality of numbers of persons simultaneously had not been thought of.

To-day all is changed. The programs of the meetings of psychologists devote more space to the discussion of intelligence tests than to any other single topic. When schoolmen and teachers meet, this question claims their attention and interest, and in the schools themselves throughout the country extensive "testing programs" are conducted and the results used for improvement in teaching and administration.

The development and standardization of intelligence tests have resulted in four main types—two of which are for administration to individuals and two to groups. These are:

1. The Binet tests and their revisions and additions.
2. The performance tests for individual administration, including the various form-board tests, puzzle tests, picture tests, etc.
3. The group-intelligence tests of the Army Alpha type—paper and pencil tests for the most part of a linguistic nature.
4. The group-intelligence tests of the Army Beta type, performance tests reduced to paper and pencil form, for use particularly, though not exclusively, in the examination of little children, illiterates, and non-English-speaking groups.

I.—THE DEVELOPMENT OF MENTAL TESTING.

Definite and systematic attempts to measure mentality began 18 years ago, when Binet and Simon in 1905 published in *L'Année Psychologique* of that year their collection of tests designed to de-

¹ Doctor Colvin was preparing this manuscript at the time of his death. Apparently not fully completed, it is published in substantially the form in which he left it.

determine the native intelligence of school children. These tests were framed for the purpose of segregating defective children in the schools of Paris from those of normal mentality, with the aim of providing these unfortunate pupils with the instruction best suited to their limited intellectual capacities. Thus, like many other significant and far-reaching movements in psychology and education, mental testing began in an attempt to help the subnormal and defective, and has since spread until it finds its largest and most useful field in the realm of normal psychology,

These first mental tests were not merely the outcome of a happy guess or of a flash of genius. Binet's many years of expert psychological observation and experimentation achieved their most significant results in the construction of these tests. The first series of tests were preliminary and tentative in their nature. From applying them to children of various ages Binet found, for example, what was the average attainment in the various tests of normal children at various ages. This resulted in the construction of the intelligence scale of 1903. In this scale, groups of tests were arranged for children beginning with the third year and continuing through the thirteenth year. The tests were arranged "according to the ages at which the majority of children succeed in them." The number of tests for the various ages varied from eight for 7 years to three for 13 years, the most frequent number being five. The scale was revised by Binet in 1911, the year of its author's death. In the 1911 scale there were tests for all ages from 3 to 12, inclusive, a test for the fifteenth year, and a final test for adults. Under each age there were five subtests, with the single exception of the fourth year, for which only four subtests were given.

Although the most extensive and significant work in mental testing has been done in America, the Binet tests were slow in making their appearance in this country. Goddard, then psychologist at the school for feeble-minded in Vineland, N. J., first learned of these tests in 1908, and in December of that year published a brief account of the tests of 1905. In January, 1910, Goddard published an abstract of the scale of 1908. Goddard was at first extremely critical of the value of this scale. He says, "It seemed impossible to grade intelligence in that way. It was too easy, too simple." However, when the abstract of the scale was used he found that it "was a surprise and gratification." The classification of 400 feeble-minded children at Vineland by the Binet method during this year "agrees with the institution's experience," and Goddard became an enthusiastic proponent of Binet's scale.* He followed his survey of the children at Vineland by applying the tests to 2,000 normal children.*

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Since the introduction of the Binet scale to America several important revisions and adaptations have been made. In 1915 appeared the point scale by Yerkes, Bridges, and Hardwick, and a year later the Stanford revision by Terman. Yerkes's revision is particularly notable because of its method of scoring and the order of the presentation of the tests. Among other revisions may be mentioned that by Kuhlmann and the recent emendations by Herring.

As has been pointed out already, the Binet tests were found insufficient and inadequate in certain particulars. Perhaps the chief criticism to be brought against them, however, is that they are individual tests, and that they can not be satisfactorily given unless the person who administers the test has adequate training and considerable practical experience. The fact that these tests are individual means that they must be given to each child separately. In a room of 40 children this would require a total time for testing of about 20 hours. It would further require a skilled person to give the children the tests, and therefore any attempt to measure the intelligence of a group of school children, such as would be found in a town or city even of moderate size, would necessitate an amount of time and an expenditure of money that would seem in many cases prohibitive. When a few children are to be tested for specific reasons, the Binet tests may be advantageously employed, but when the intelligence of all the children in a school system is to be surveyed, then another instrument for measuring intelligence must be found if possible. Such an instrument now exists in the various group tests to-day available for testing the intelligence of all children in our schools from the kindergarten through the high school, and, indeed for mature students, in colleges and professional schools.

While the development of intelligence tests, based on the pioneer work of Binet, was going on, psychologists were employing various tests to discover how individuals differed in certain physical and mental capacities. The study of individual differences, begun by Galton in England, was made known in this country in the last decade of the nineteenth century, largely through the work of James McKeen Cattell, then professor of psychology in the University of Pennsylvania and later of Columbia University. Cattell gave psychological tests of the sensory and motor type to students at the University of Pennsylvania and later at Columbia University. The article by Cattell and Farrand appearing in the *Psychological Review* more than a quarter of a century ago gives an interesting statement of this work and the results achieved. An examination of Cattell's tests shows that they concern themselves largely with sensory discrimination and rapidity of reaction. Likewise immediate memory (memory span) is tested by finding the number of letters a

subject remembers at one hearing. Ability to estimate space is determined by a test requiring the bisection of a line of 50 centimeters; ability to estimate time is tested by estimating a 10-second interval. A judgment of least noticeable differences in weight is also included. In a later article by Cattell and Farrand we find a description of the further extension of the work of mental testing as employed with students of Columbia University as subjects. The tests used included handwriting, visual acuity and color vision, auditory acuity and perception of pitch, sensitivity of the skin, perception of weight, sensitivity to pain, accuracy and steadiness of movement, reaction time, cancellation of A's, perception of time and space, memory span, memory of length of a line previously drawn, after-images, and mental imagery. In regard to the tests Cattell says: "Our experience with these tests leads us to recommend that they be made a part of the work of every psychological laboratory."

These tests were given to individuals of normal mentality. At the same time other psychological tests of a somewhat different type were being developed through efforts to train the feeble-minded. Here the work of Sequin can not be overlooked.

In his work with children of low-grade intelligence Sequin found the form board of value. The form-board test has passed through various adaptations, but its essential character has been kept. It consists in fitting wooden blocks of various shapes into forms cut out to receive them. The board may be very simple, or it may be made as complex as desired, not only as to the shape and number of forms used, but also in regard to the blocks to be fitted, since each block may be a single solid piece or composed of a number of pieces, in which case the pieces must themselves be fitted together as well as placed in the proper form. A variation of this test consists of a puzzle in which various parts of a figure or shape are required to be fitted together, as, for example, in the Healy manikin puzzle. Picture-puzzle tests have been largely used in recent years as performance tests. In this type of test the various parts of a picture are to be arranged in their proper order. In some instances a picture with parts omitted is given the subject, and he is required to complete the picture by filling in the gaps with the proper blocks. Another type of picture test consists in arranging a series of pictures in such an order that they tell a complete story. A form of the performance test that is now frequently used is the "maze test." This test was used extensively 20 years ago, in the earlier days of animal psychology when the intelligence of an animal, such as a white rat, was studied by finding how easily and surely the animal could learn to go through the passages of a maze and get to the center where the food was placed. The Porteus maze test for detecting

feeble-mindedness is the best adaptation of this test. The maze test when used with human beings is a paper and pencil test of the performance type. The maze is printed on a sheet of paper, and the person tested is required to trace with a pencil the correct way of going through the maze. The form-board test and the various picture-puzzle tests have also been adapted to paper and pencil use, but nevertheless retain essential characteristics as performance tests.

The performance tests, like the Binet tests and the tests employed by Cattell, were originally of the individual type and required a large amount of time in the aggregate for their administration as well as expert skill on the part of the person giving the test. The great advance in the technique of administering intelligence tests came when these tests were so constructed as to enable them to be given to groups of individuals rather than to persons one at a time. Group testing, although practiced to some extent before 1917, owes its chief impetus to the formulation of the so-called Army tests that were employed on an extensive scale after America had entered the World War.

At this time the various attempts at intelligence testing were brought to a head in the construction of the Army Alpha mental examinations for the literates and the Army Beta examinations for the illiterates. The Army tests were the first instances of paper and pencil tests that were applied to groups of individuals on an extensive scale. The Alpha tests trace their origin more or less directly to the various psychological tests employed to determine individual differences, and to the Binet tests and their various revisions. The Beta tests were more closely allied to the performance tests previously mentioned, but were adapted to the paper and pencil form, and were designed, like the Alpha tests, for measuring the mentality of those tested in groups rather than through individual examinations.

The results of the Army tests were so satisfactory that on the conclusion of the armistice they were made public, and the Army Alpha was given widely in schools, colleges, and universities during the year 1919. Prior to this time, in the fall of 1918, the so-called Brown University test was given to the men in the Students Army Training Corps and the naval unit at Brown. It has since been continued with all entering classes at that institution and is now in its fifth year of trial. This fact is mentioned because it would seem to be the first group intelligence test to be consistently and continuously used and standardized. It precedes somewhat, in point of time, the various group tests that have been devised and published during the last three years, in all numbering nearly 40 separate tests.

II.—THE BINET TESTS.

The Binet tests as they exist in their most careful and comprehensive revision and extension are known as the Stanford-Binet, and in their present form are the work of Lewis M. Terman. The Binet scale as perfected by its author is composed of 54 tests. The Stanford revision consists of 74 main tests and 16 alternates—90 in all. There are 36 tests not found in the original Binet scale. The present character of intelligence tests owes so much to the Binet test and its revisions that it will be of assistance to describe in some detail the nature of the Stanford-Binet.

This scale like its prototype has a series of tests arranged for various years. Terman speaks of them as "stunts, or problems, success in which demands the exercise of intelligence." This description while fairly good is not entirely accurate, since many of the tests included clearly involve no problem in the generally accepted sense of the term, being based on recognition of familiar objects, on simple associations, and on acts of skill. Still others require concentrated attention and memory for immediate impressions. In all roughly less than half involve comparison, judgment, and reasoning.

In the Stanford-Binet, there are six main tests for each year from 3 through 10. There are eight tests for the twelfth year and six for the fourteenth year. An average adult and a superior-adult level are included, each with six main tests.

The Stanford-Binet, like its original, begins with simple tests to determine the child's knowledge of common objects in his environment. The child is asked to point to his nose, eyes, mouth, hair; to name familiar objects, to enumerate objects in a picture, to give his sex, and to tell his last name. In later years he is asked to name colors, to distinguish between his right and left hand, to discover what is missing in a mutilated picture, to recognize familiar coins, to tell whether it is morning or afternoon, to name the days of the week, to tell the month, the day of the month, and the year, to give the meaning of words in a series of vocabularies progressing in difficulty for the various ages tested, and the like. Tests of this character clearly do not involve a mental ability beyond that of the perceptive and associative processes of the human mind, and they are definitely dependent on the experiences of the child in school and out. No mental ingenuity of a high degree of complexity, no rational processes of a developed sort are here demanded. These tests seek primarily to discover the child's *range of information*.

In the tests of the third year is found a simple *memory-span test*. The child is required to repeat such a sentence as, "In summer the sun is hot," or as an alternative test to repeat three digits as, "3, 5, 2." The memory-span test appears in various forms at other levels.

The child of 4 is required to repeat 4 digits, or as an alternative test 12 to 13 syllables. At 6, he is required to repeat 16 to 18 syllables; at 7, 5 digits, and as an alternative test to repeat 3 digits backwards. At 8, an alternative test requires the child to write from dictation the sentence, "See the little boy." At 9, one of the tests is to repeat 4 digits backwards. At 10, there are two alternative tests of the memory-span type, one to repeat 6 digits and a second to repeat from 20 to 22 syllables. A test for the twelfth year requires the repetition of 5 digits backwards, while an alternative for the fourteenth year requires the repetition of 7 digits in the order of original presentation.

The average-adult test has the requirement of repeating 6 digits backwards, or as an alternative 28 syllables; while the superior-adult test requires the repetition of 8 digits in the order of presentation and 7 digits backwards. Tests of this type have been used by psychologists for many years, the general conclusion being that there is a fairly close relation between immediate-memory ability and school attainment. A memory test of a somewhat different type is included under the tenth year. A brief report of a fire is read and the child is required to give back the essential ideas. A more complicated test of this type is placed as the superior-adult level.

In the tests for the fourth year there appears the attempt to measure the ability of a *simple act of skill*, the counting of 4 pennies; at the six-year level the requirement is to count 13 pennies, while at the eight-year level the child is required to count from 20 back to 1. Such tests as these require a degree of attention, but little of a high intellectual type.

At the fourth-year level the child is required to copy a square; at the seventh, a diamond; and at the tenth, to draw designs from memory. These latter may be considered not only as a test in comprehension of details but a test in execution as well. The Binet scale is weak in tests of this type. Indeed, it has been criticised because it is very largely verbal and includes very few *performance tests*. A thoroughgoing performance test is included in the sixth year, when the child is required to tie a bow knot after being shown a model. One of the alternative tests for the tenth year is the Healy and Fernald form board. In the eighth and twelfth years is found the ball-and-field test (original with Terman). Here the child is required to indicate by drawing lines how he would attempt to locate a ball lost amid the high grass of a circular field. This test includes not only performance but the perfecting of a plan, and may be considered as one of a variety of tests demanding *ingenuity and judgment*.

In the fourth year, first appear tests demanding *discrimination and comparison*. The child is required to compare two lines and tell which is longer. In later years (fifth and ninth) he is asked to compare weights. At the fifth-year level his aesthetic judgment is tested by presenting to him paired pictures and asking him which is the prettier. In the fourth-year test, also, the child is required to identify a form shown him by indicating another like it. Tests requiring the detection of *similarities and differences* on higher levels are frequently found in the Stanford-Binet, accompanied by requirements demanding knowledge of the meaning of words and verbal comprehension. Instances of tests to determine similarities are found at the eighth-year level, when the child is asked to indicate resemblances between wood and coal, etc., and at 12, between snake, cow, and sparrow. Differences in meaning are emphasized in the test for the seventh year, when the child is asked to tell the difference between a fly and a butterfly, and again in the test for the fourteenth year, when the child is asked to point out the respects in which a president and a king differ, and finally for the average adult when differences in meaning between abstract terms are required. These *same-opposites tests*, as they have been recently termed, appear in modified forms in most intelligence tests, and they belong in a way to the large group of *controlled association tests* that have long been material for psychological experimentation. The opposites test in particular dates back a score of years, and has been found by many investigators to show rather high agreement with other evidences of intelligence.

Linguistic knowledge and discrimination are further evidenced by the *vocabulary tests* already spoken of and by a number of tests involving to a degree abstract and logical abilities. These qualities are called into play by the *definitions tests* beginning with the fourth year. At this level of development the child is expected to define such simple words as chair, horse, and fork, in terms of their use, e. g., "Fork is to eat with." Here, little more than simple association is demanded. However, in later years, definitions in terms of qualities of objects, such as balloon and tiger (eighth year) and pity and revenge (twelfth year), are required. In this latter test, particularly, the higher verbal and mental abilities are explored.

Verbal fluency on the basis of the simple associative processes is again tested in the *uncontrolled association test* measuring the "flow of ideas." This test was mentioned in the psychological literature more than 80 years ago and has since been extensively employed by investigators. The subject is asked to start with some word at a given signal and to keep on saying words as fast as he can until he has thought of, for example, a hundred, or has occupied a certain number of minutes. The test is used in the Stanford-Binet at the

tenth-year level when the child is required to think of 60 words in three minutes to pass the test. A *rhyming test*, likewise involving verbal fluency, is found in the ninth year.

Verbal ingenuity coupled with comprehension of meanings is found in the so-called *dissected-sentences test*, termed in more recent tests "disarranged sentences," given in the Stanford-Binet as one of the tests for the twelfth year. A sentence with the words mixed up, as for example, "A defends dog good his bravely master," is shown to the child, and he is asked to put the words in a sensible order. A test involving a higher degree of linguistic invention, a *sentence construction test*, is placed at the ninth-year level. Three words are given, such as desert, rivers, lakes, and the child is asked to put these into a sentence. This is a test that antedates by a number of years the Binet scale of 1905.

There are a number of tests involving *comprehension* and *rational ability* in the Stanford-Binet not so closely indentified with linguistic knowledge and fluency as those above described. Among these may be mentioned the interpretation of the meaning of fables. This Terman calls a "test of generalization." He is chiefly responsible for its development, though it was first suggested somewhat earlier. A fable is read to the child, who is asked to tell its meaning. This test is for the twelfth year. It is also an item in the average-adult test. Another rational test which may be considered to measure the *practical judgment* is called in the Stanford-Binet a *comprehension test*. It is given in varying degrees of complexity at the fourth, sixth, eighth, and tenth-year levels. At the fourth-year level such a question as the following is asked, "What must you do when you are sleepy?" At the tenth-year level, one of the questions reads, "Why should we judge a person more by his actions than by his words?"

Another test somewhat similar to the foregoing, since it relates to practical affairs and involves an element of judgment, is the *absurdities test* employed for the tenth-year level. A sentence is read to the child, who is asked to point out the absurdity contained in it, as for example, "Yesterday the police found the body of a girl cut into 18 pieces. They believe that she killed herself." A further test requiring the use of reason in a similar degree is the *fact-problem question* for the fourteenth year. This test is as follows: "My neighbor has been having queer visitors. First a doctor came to his house, then a lawyer, then a minister. What do you think happened there?"

Tests requiring the use of the reasoning abilities in a still higher measure are the *induction test* also for the fourteenth year and the *ingenuity test* for the superior adult.

The induction test consists in arriving at a rule from the presentation of concrete instances. The ingenuity test is as follows:

A mother sent her boy to the river and told him to bring back exactly 7 pints of water. She gave him a 3-pint vessel and a 5-pint vessel. Show me how the boy can measure out exactly 7 pints of water using nothing but these two vessels and not guessing at the amount.

Terman comments on this test:

This requires practical judgment and a certain amount of inventive ingenuity. . . . Formal education influences the test little or not at all, the unschooled business men making a somewhat better showing than high school students.

Two further tests involving rational ability should be mentioned, one the *comprehension of physical relationships* and the other the *problem of the enclosed boxes*. Both are for the average-adult level. The first named is an alternative test. The subject is asked to draw the path of a cannon ball pointed horizontally and fired across a perfectly level field.

The subject is also asked what a bucket filled with water and tipping the scales at 45 pounds will weigh when a 5-pound fish is added. Quite frequently the person tested will reply 50 pounds (the correct answer), but when the administrator of the test asks quite seriously, "How can this be correct, since the water itself holds up the fish?" The subject may become confused and reply that he is uncertain or admit that he is in error.

As a third part of the physical relations test, the subject is asked if it is harder to hit a mark of a certain size at 100 yards (providing that the gun carries for that distance) than at 50 yards? The subject must not only reply in the affirmative, but must give a satisfactory reason for his answer.

The three tests described above are interesting not only because they involve rational procedure of a fairly high degree of complexity, but also because they involve a knowledge of physical facts that are or should be a part of everyday experience, as well as of the more abstract tuition of the schools. In the present-day intelligence tests very few of these practical problems are emphasized, though there are some tests that demand *knowledge of scientific and mechanical facts*⁴ in a limited degree, a knowledge that most educated persons seem to lack in a large degree. The second part of this test is interesting also because it measures not only knowledge of physical facts of principles, but to a degree the *ability* of the individual *to resist suggestion*, and confidence in his own knowledge. This aspect of the test at once suggests that it is in part a will and character test as well as a test of knowledge and intelligence.⁵

⁴ See particularly Thorndike's Examination for High School Seniors and College Freshmen.

⁵ Ability to resist distractions is one of the elements included in the Downey will-temperament test, that seeks to measure certain fundamental character qualities.

The second test of the problem type, mentioned above, that of the enclosed boxes, is as follows: The person administering the tests shows the subject a cardboard box and then says, "This box has two smaller boxes inside, and each of the smaller boxes contains one tiny box. How many altogether?" The problem is further complicated in subsequent questions. This test is not only a test of rational ability, but appeals to the visualizing element as well. In the Stanford-Binet a number of visualizing tests are found. These are discussed in a later paragraph.

In recent intelligence tests *arithmetical problems* have often been included. In the Stanford-Binet such a test is placed at the fourteenth-year level. Four simple problems are given, and one minute is allowed for the solution of each problem. Intelligence is manifested in school largely as learning ability. In one sense of the word the Binet tests all measure learning ability, since they are based on materials acquired through experience, and not a few through the definite instruction of the school, as for example, tests involving the meaning of words and the distinction between words, counting, making change, arithmetical reasoning. There is, however, one test that directly involves the ability to learn something essentially novel, and it tests this *learning in operation*, so to speak. This test is one of the six main tests devised for the average adult. The subject of the test is shown a code consisting of the letters of the alphabet arranged in such a way that each is represented by a part of a geometrical figure, forming angles of various sorts. The subject is given a brief instruction in the code, and then is required to write the words, "Come quickly," when the code is removed. This test has a certain similarity to the so-called *substitution tests* (to be described later in discussing group intelligence tests), but it also involves the factor of memory, not required in the substitution tests as ordinarily employed. The factor of visual imagery also enters into the code test.

As already stated, a number of the Stanford-Binet tests are wholly or in part measures of the *ability to visualize*, a rather specialized capacity and not necessarily a mark of high mentality. The form-board test, previously mentioned, is dependent to some extent on visual ability. The clock test for the fourteenth-year level demands a considerable degree of visual imagination. In this the subject is asked such a question as the following:

Suppose it is 6.22 o'clock, that is, 22 minutes after 6; can you see in your mind where the large hand would be, and where the small hand would be? Now, suppose the two hands of the clock were to trade places . . . what time would it then be?

A still more complicated kind of visualization is demanded in the paper-cutting test for the superior-adult level. A piece of paper about 6 inches square is folded first once in the middle and then again in the middle, at right angles to the first fold. Then a small

notch is cut in the middle of the side that presents but one edge and the subject of the test is asked to draw how the sheet of paper will look when it is unfolded. It is possible to solve this test with slight use of visual imagination, by the aid of abstraction and rationalization. However, it is primarily a test of visualization. A simpler form of a visualization test is found as early as the fifth year in the "patience, or divided rectangle test." In this test two rectangular cards are used, one divided into two triangles by cutting it along one of its diagonals. The instructions read:

Place the uncut card on the table with one of its longer sides to the child. By the side of this card * * * lay the two halves of the divided rectangle with their hypotenuses turned from each other * * *. Then say to the child: "I want you to take these two pieces (touching the two triangles) and put them together so they will look exactly like this" (pointing to the uncut card).

This test is interesting not only because of its appeal to visualization, but because it has in it the transition stage from what may be considered a pure performance test of the form-board type to *performance tests of the paper and pencil type*, in which positions of geometrical figures are indicated by drawing lines on paper. This paper and pencil adaption of the form-board test is used extensively in group intelligence tests (to be described later) for small children and illiterates, of which the Army Beta test is the prototype.

A description of the Stanford-Binet should not conclude without a description of the *directions test*. At the fifth-year level the child is asked to execute three commissions, as follows:

Here's a key. I want you to put it on the chair over there; then I want you to shut (or open) that door, and then bring me the box that you see over there. Do you understand? Be sure to get it right. First put the key on the chair, then shut (open) the door, then bring me the box. Go ahead.

This test involves attention to the instructions given, a comprehension of them, and sufficient immediate memory to execute them. It is far less dependent on instruction in the schools than the majority of the tests we have discussed. The directions test, as will be pointed out later, has in various forms been long employed by psychologists. It occupies an important place in the Army Alpha and Beta, and is found in many of the group intelligence tests now commonly in use.

A summary of the nature and scope of the Stanford-Binet includes the following important facts:

1. The types of tests used, arranged approximately in order of their frequency, are:

- (a) Range of information tests, designed to measure the child's familiarity with objects of common experience, this knowledge to a considerable extent gained outside of specific school instructions. These tests include, roughly, one-quarter of the total number.

(b) Tests involving rational abilities, ranging from the most simple to the more complex. These include comparison of objects and words, the noting of similarities and differences in these, ingenuity, ability to generalize, and ability to solve problems. In these tests are included the ability to form practical judgments and to comprehend and interpret physical relationships. In all, nearly a quarter of the tests are to be classified under this second head. These tests are predominantly verbal and abstract in their nature and closely related to schooling.

(c) Memory-span tests and tests for immediate memory of ideas. Nearly a fifth of the tests are of the memory-span type, and not closely related to school progress.

(d) Tests primarily depending on verbal fluency and ingenuity. These included a free-associations test, a dissected sentence test, sentence construction test, a rhyming test, and several definitions tests. A considerable number of vocabulary tests (primarily classified as range of information tests) might also be included here. Further, the whole series of Binet tests is pronouncedly verbal in its nature, and in this particular the result is definitely dependent on schooling.

(e) Tests involving knowledge of numbers and their relationships. Here are included tests in counting, making change, etc., as well as the single test in arithmetical problem solving. These tests are largely dependent on the formation of habits of simple skill most commonly taught in the schools.

(f) Tests involving concrete visualization and eye-imagery. These tests detect a rather special kind of ability that is not generally emphasized in school training. However, the schools do place emphasis on that kind of visual imagery involved in the spelling and recognition of words and symbols. This latter is, however, of the abstract sort, and is not definitely tested in the Binet scale.

(g) Performance tests are found in a few instances. In these the individual is required to do something, as distinguished from knowing something. In a sense all kinds of simple and complicated skills are evidences of performance. Here, however, the term is applied to something definitely related to manual dexterity, such as tying a bow-knot, finding a missing ball, and the execution of a form-board test. As has already been said, such tests as these are infrequent in the Binet scale. A test closely allied to this type is the directions test (executing three commissions), discussed above.

(h) Other tests, occurring but once and not as easy to classify under the preceding analysis, are:

Detecting parts in a mutilated picture (on the whole a range of information test):

Interpreting the meaning of a picture (possibly to be classified as a reasoning test).

Writing two words, according to a code previously studied (a test for learning and memory).

Detecting absurdities in a statement (involving knowledge, comprehension, and at times a sense of the significance of words).

2. The dependence of the tests on the child's experience and particularly his schooling is to be noted. This has previously been pointed out. It is quite clear that the validity of these tests is based on the assumption that children tested have all had a common experience, and hence that the differences are not due to differences in training, but to differences in innate mentality. This important point will be referred to and developed later, since it is essential in the whole theory of intelligence testing.

3. It is an important fact to be noted particularly in a later discussion of the nature of native intelligence that the Stanford-Binet includes in its scale so many tests that are really the measure of acquired ability, rather than an indication of abilities now in operation. They measure the results of mentality in acquisition of knowledge and skill, much more than they measure mentality in its immediate operation, so to speak. That is, a vocabulary test shows the product of previous learning, not learning in progress. The same is true of a counting test, and the many tests that appeal primarily to perceptions already formed. On the other hand, for example, the memory-span tests, ingenuity tests, and the like involve an active and alert mind, and build on experiences already acquired. Nevertheless, all of these tests rest on a definite basis of acquired experiences, and only to a limited degree test experiences in the making. This very important fact is characteristic not only of tests of the Binet type, but of all intelligence tests so far devised. This fact will be discussed at length in a later section.

III.—ARMY. ALPHA TESTS.

Since the great impetus in group intelligence testing was brought about by the use of the Army tests, and since the paper and pencil tests that are now in use are more or less directly constructed on the basis of the Army tests, a brief analysis of these tests will be helpful in an understanding of the tests more recently devised.

First, in the construction of these tests the following important points^o were kept in mind, considerations that should apply to the formulation of all tests of this general type:

In the first place, the tests were so constructed that large groups could be examined rapidly. Further considerations emphasized the necessity of devising tests that should measure as far as possible native intelligence rather than acquired knowledge and skill (i. e., mental ability rather than schooling.) In the third place, the tests attempted to measure intelligence of low as well as of high levels.

^o Army Mental Tests, Yerkes and Yerkes, New York, 1920, pp. 2 to 7.

They were so constructed that those of poorest mentality could make a score of some sort, while those of the highest intelligence would still be enabled to obtain a perfect score. It is clear that if on the one hand any considerable proportion of a group tested received zero scores that such a test would be an unsatisfactory measure of the abilities of the group. It is equally clear that if a large proportion received perfect or very high scores the test would be equally undesirable. In order that both of these extremes should be avoided great care was taken in the construction of these tests not only to include materials sufficiently easy for those of the lowest mentality likely to be measured, and sufficiently difficult for those of the highest mentality, but also to make the time for administering the test sufficiently long for the majority tested to have opportunity to achieve scores up to their capacity, and sufficiently short to require mental alertness for completion of the tests within the limits necessitated by the practical conditions of the examination. A time limit of 50 minutes was finally fixed.

The tests were arranged so that the scoring could be objective. Personal opinion in regard to the correctness of the answers given was practically limited. For each test and for each subtest one answer and only one answer was correct. Stencils (keys) to the right responses were provided, so that any intelligent and careful clerk, although he might not be able to obtain a high score himself, could grade with entire accuracy any individual test, and would be in entire agreement with any other similar person grading the same test. When the fact of the enormous variability in teachers' grades of the ordinary school examinations is remembered, this emphasis on objective scoring is seen to be absolutely necessary if reliable results are to be obtained. Further, not only was objective scoring insisted on, but complete uniformity of administration of the tests was also required, a very important consideration in the use of all tests in which various groups of individuals and various individuals within a group are to be compared.

Among other considerations kept in mind in the construction of the tests, the most important were that alternative examinations, tests of the same character, but different in content, should be provided to prevent the possibility of coaching; that there should be required only a minimum amount of writing on the part of the individual tested; and that the materials should stimulate the interests of those examined.

With these purposes in mind the committee constructed a preliminary series of tests, using in this work their knowledge of mental tests that had already been employed, and securing the judgment of competent psychologists as to the relative values of these prelimi-

nary materials. The next step consisted in actually trying out the preliminary series and studying the scores obtained for purposes of further revision. When two subtests were found that agreed very closely in the results secured this was an indication that one was superfluous, since both apparently measured the same thing. When, on the other hand, a very slight relationship between a subtest and the total test score was found, this was taken as an indication that the test in question was of little value in measuring the mental abilities of those examined.

Another important consideration kept in mind by the committee in studying the results obtained in these preliminary tests was their so-called reliability, namely, Do the test results obtained on a first trial agree with results obtained on subsequent trials?—a very important matter to have in mind in judging the value of tests of this type.

After various preliminary try outs and revisions according to these findings, a general intelligence test was formulated that was tried out in the fall of 1917 on about 80,000 men in the United States Army. As a check on these results about 7,000 students in colleges, high schools, and elementary schools were given the same examination. Then more than two months were spent on the careful study of these results.

The above somewhat detailed statement of how the Army tests were prepared is given in order to emphasize the fact that valid mental tests are not the outcome of individual opinion or clever guessing, but are the result of careful and painstaking study and statistical treatment. Only in this way has mental testing advanced to the position that it now holds, and only in this way can it hope to develop further and become a more perfect instrument for the guidance of teachers and school administrators.

Test No. 1 in the Army Alpha, the *directions test*, has been used in various forms in a number of the later group tests. In the Army Alpha the test is administered orally, as has been pointed out in the above discussion. In the more recent tests the directions are printed and the subject follows these instructions. A further difference is found in the fact that when administered in the latter manner the instructions need not be carried in mind since they can be referred to from time to time. Thus a less degree of mental alertness and a minimum of memory span is required.

In the Otis group intelligence scale advanced examination, Form A, the tests take the following form in connection with the letters of the alphabet printed at the top of the test sheet:

Direction 8. Write the letter which follows the third letter of the alphabet.

Direction 19. Find the letter which in this sentence appears a second time nearest the beginning. Write it, using a capital.

In the Otis self-administering tests of mental ability a variation appears as follows:

If all the odd-numbered letters in the alphabet were crossed out, which would be the tenth letter not crossed out? Print it.

For measuring intelligence among little children the directions test is used generally in connection with pictures, as, for example:

Look at the cat and the rat. Draw a line from the cat's mouth to the rat's tail, or

Draw a ring around the mouse.

In the Smith College tests the directions test is closely modeled after the Woodworth and Wells hard directions test, an example of which has been given above. Roughly a dozen of the most commonly used intelligence examinations employ in some form the directions test.

Test No. 2 in the Army Alpha is an exercise in simple *arithmetical problems*. As has been pointed out, a test practically identical with this is found in the Stanford-Binet. In recently devised group tests arithmetical problems occupy an important place, being included in nearly all the scales that attempt to measure intelligence in the upper grammar grades, high school, and college. Clearly this test measures intelligence through a specific skillful activity largely dependent on schooling. Even to a greater extent tests based on exercises in fundamentals in arithmetic, not included in the Army tests, not in the Stanford-Binet, but found in a number of group intelligence tests for school and college, measure a specific attainment in learning acquired in the elementary school.

Test No. 3 in the Army Alpha is a common-sense or *best-reasons test*. It requires practical judgment of a very simple sort, but can be complicated to include rational abilities of a fairly high order. It is as follows:

Below are 16 questions. Three answers are given to each question. You are to look at the answers carefully; then make a cross in the square before the best answer, as in the sample:

Sample	{	Why do we use stoves? Because—
		<input type="checkbox"/> they look well,
		<input checked="" type="checkbox"/> they keep us warm,
		<input type="checkbox"/> they are black.

The best reasons test is found in about a third of the important group intelligence examinations now in common use. Although it is not definitely copied from the Stanford-Binet it relates itself clearly to the practical judgment tests in this scale.

See:

Haggerty, Delta I, Grades 1-3.

Detroit Kindergarten and Detroit First Grade.

Otis Primary, Form A.

Dearborn, Grades 1-3.

Myers' Mental Measure.

Test No. 4 in the Army Alpha is a *same-opposite* test. Two words are paired and after each are the words "same-opposite." The subject of the test is to indicate the relationship of the paired words by underlining either *same* or *opposite*, as for example:

good—bad _____ same—opposite.
 little—small _____ same—opposite.

This test depends very largely on knowledge of the meaning of words and thus is dependent to no small extent on schooling, as is clearly evidenced by the more difficult parts of the test; for example:

largess—donation _____ same—opposite.
 encomium—eulogy _____ same—opposite.

This test finds no exact counterpart in the Stanford-Binet. As has been pointed out, there are, however, various tests in this scale that have to do with likenesses and differences.

The same-opposite test in its various forms is one of the tests most frequently employed in the group tests now in common use. At times it appears as a same-different test in which the paired words or objects may be related through similarity or difference (not necessarily opposition). For example, numbers, proper names, symbols, etc., are printed in a column or on an entire page. In another column, or on a separate page, those numbers, names, and symbols that correspond with those in the first column are scattered among others that do not so correspond. These former are to be picked out and identified. In examinations framed for little children another variation is found. Pictures are to be compared for the purpose of discovering similarities of simple words; are to be identified, and differences are to be detected, in words orally presented.

Still other variations of this test are as follows:

Select from the parentheses opposite the first word the word that has nearly the same meaning and underline it:

Prolix _____ (terse, profound, drastic, verbose).

Underline the word in the parentheses that is the best opposite of the word at the left:

1. East _____ (north, west, south, pole, equator).

25. Unless _____ (and, therefore, however, also, if.).

An early form of the opposite test, still preserved in a number of the present group tests, consists of a series of words after each of which an opposite is to be written.¹⁰ The objection to this form

¹⁰ Smith College tests, Form 2.

¹¹ Compare:

Chicago, Freeman & Rugg, Form B.

Smith, Univ. of Montana, High School and College.

Otis, Self-Administering, Higher Examination, Form A.

Brown University Intelligence Examination.

¹² See:

Mentimeter 2.

Pressey—Indiana Mental Survey, Scale 1.

of the test is in the difficulty of scoring it objectively since the individual judgment of the person correcting the test determines whether a correct opposite has been given or not. When, however, several words following the stimulus word are printed in parentheses, one and only one of these words can be correctly underlined, and thus the scoring is independent of the personal equation of the individual correcting the test, a very important matter in the administration of mental tests. In the form in which the test is given in the Army Alpha the scoring is quite objective, but the opportunity for guessing is great, since without actual knowledge of the relationship of the words paired, the individual taking the test may (and on the whole will tend to) get half of the answers right by mere chance. This has made it necessary in this test, and indeed in all tests where only two replies are possible, one right and the other wrong, to score such a test by subtracting the number wrong from the number right. However, the justice of this procedure has recently been criticised severely in a certain discussion.

The safest way probably is to provide in all tests a number of alternative replies, thus making negligible the factor of mere chance in the response.

Test No. 5 in the Army Alpha is the *disarranged sentence*. It is as follows:

Below are 24 mixed-up sentences. . . . Think what each would say if the words were straightened out, but don't write them yourself. Then if what it would say is true, draw a line under the word "true," but if what it would say is false, draw a line under the word "false." If you can not be sure, guess:

Samples:

a	eats	cow	grass	_____	true	false
horses	feathers	have	all	_____	true	false

It is to be noted that this test consists essentially in the correct rearrangement of the mixed-up words and not in the judgment as to whether the statements resulting are true or false. The underlining of one of these words is merely to indicate whether the mental operation of rearrangement required has been correctly performed. The device saves time in response and leads to ease and objectivity in scoring. However, like the test previously described, the chances of guessing correctly are one out of two.

This test, as has previously been pointed out, is found in the Stanford-Binet scale at the twelfth-year level in practically the same form as it appears in the Army Alpha.

The disarranged-sentence test is used in about a quarter of the most common group examinations. In some of its variations it avoids the factor of guessing found in its army prototype. For example, the Otis self-administering examination has the following:

If the words below were arranged to make the best sentence, with what letter would the last word of the sentence end? Print the letter as a capital: sincerity, traits, courtesy, character, of, desirable, and, are _____ ()

The Pressey Indiana Mental Survey, Scale 1, uses still another device. A sentence of which the following is an example is given: "asked me way I girl the to show the." Then comes the instruction—"Put one line under the first word of the sentence; two under the last."

The Pressey Cross-out tests place among the words in the disarranged sentence one not belonging there. The response required is to cross out this misplaced word.

Still another variation in the form of a directions test is in the Miller mental ability test for grades 7 to 12 and for college freshmen. Examples are;

Don't rewrite the sentences. Do what they tell you to do.

This underline sentence.

Comma the a place after word longest this in.

Test No. 6 in the Army Alpha series is a *number completion test*. Six numbers bearing a certain relation are arranged in order. It is required that two numbers be added having this same relationship. Examples are:

3 4 5 6 7 8 — —

3 6 8 16 18 36 — —

No test of this exact type is in the Stanford-Binet scale. Roughly a third of the important group intelligence examinations have this test in some form. One of its variations as found in the Chicago, Freeman and Rugg tests, Form B, is as follows:

A. 1 2 3 4 5 — 7 8 9 — 11 12 13

J. 84 — — — — 54 — — — 30 — — — 6

In the Dearborn tests, revised series 2, grades 4-12, this test appears as follows:

Write numbers in the empty spaces so that the sums will be the same if added by column up and down, or across by rows.

Example:

5	.	.
5	5	.
4	3	7

In place of dots supply numbers to give answers as printed.

Sample:

9	.	3	1
.	7	.	.
<hr/>			
1	4	9	2

Test No. 7 in the Alpha series is a so-called *analogies or mixed-relation test*. It is as follows:

In each of the lines below, the first words are related to each other in some way. * * * See what the relationship is between the first two words and underline the word in the heavy type which is related in the same way to the third word.

1. gun—shoots—knife—run cuts hat bird

40. cold—ice—heat—lightning warm steam coat

This test has no counterpart in the Stanford-Binet. It has, however, been known to psychologists for some time, being first used by Binet in England in 1911.

A large number, at least two-thirds, of the important group intelligence examinations use in some form a mixed-relations test. Although a considerable proportion of these follow the Army type, the test appears in a number of variations, examples of which are as follows:

Egg: Bird:: (?) : plant____seed, shell, leaf, root.

(Otis Group intelligence scale advanced examinations).

Woman: Girl:: man: ?

(Pressey Indiana Mental Survey, Scale 1.) (Smith College Tests.)

Underline the two words that have the same logical relation to each other as locomotive and train.

Station horse hub baggage buggy

(Thurstone's College Test.)

A variation in Thorndike's examinations for high school seniors and college freshmen (also in Smith's University of Montana high school and college tests) consists of three geometrical figures to which a fourth is to be added that bears the same relation to the third as the second bears to the first.

The last of the Army Alpha tests is a *range of information test*. It is as follows:

In each of the sentences below you have four choices for the last word. Only one of them is correct. In each sentence draw a line under one of the four words which makes the truest sentence. If you can not be sure, guess.

1. America was discovered by Drake Hudson Columbus Balboa.

40. Scrooge appears in Vanity Fair The Christmas Carol Romola Henry IV.

The Stanford-Binet has no test of this exact type, but as has been pointed out about one-fourth of the scale is composed of tests of the informational type. The range of information test appears in some form in nearly all intelligence tests now in use. It is based entirely on what has been learned in school and out and involves little of ingenuity and judgment. In addition to the form in which it appears in the Army Alpha we find these variations:

Put a line under the thing that is the largest and a cross after the thing that is the smallest.

Man

Cow

Hen

Dog

Cat

(Pressey Indiana mental survey, scale 1)

In what sports and occupations are the following objects used? Answer with a single word.

Scenario.....	} (Smith College tests.)
Halyard.....	
Casserole.....	
Last.....	
Zither.....	

1. Do dogs run? Yes, No.

40. Are judicial decisions ever enforced? Yes, No. "

Put a plus (+) sign before each statement that is true and a minus(—) sign before each statement that is false.

1. () A lake is bigger than a pond.

25. () A pint of cream weighs more than a pint of milk.

In this last test cited is some chance for judgment and inference in item 25. In the Miller Mental Ability Test this factor is still more in evidence, as shown by the following:

The word you underline must be a NOUN that may be an EFFECT of the first word: EDUCATION (high school, books, knowledge, study).

In the Detroit first grade and kindergarten tests, in which pictures are employed in place of words, the range of information test approximates very closely the Binet originals. Examples are as follows:

Mark two things we cut with.

Mark five things we dig out of the ground.

When pictures of the crescent moon, a cup, and a sled are shown, the examiner says to the child, "Show me the thing that is up in the sky."

Again four pictures are shown and the child is asked to point to the two that show that it is summer. Here inference as well as familiarity is involved in the response.

By way of summary, it may be said that the eight tests of the Army Alpha, namely, (1) *directions test*; (2) *arithmetical problems*; (3) *best reasons test*; (4) *same-opposites test*; (5) *disarranged sentences*; (6) *number completion*; (7) *mixed relations*; (8) *range of information*, have been extensively employed in various forms in subsequent group tests. Not one of these eight originated in principle in the Army Alpha. Tests Nos. 2 and 5 are copied almost exactly from the Stanford-Binet; tests Nos. 1, 3, and 8, are closely related to similar tests found in the Stanford-Binet. Of the remaining three tests No. 7 was devised about seven years before it was incorporated into the Army Alpha, while test No. 4 belongs to a still earlier period. The number completion test alone possessed an element of novelty. The contribution that the Army Alpha made to the development of mental testing was not in the originality of the tests themselves, but in the fact that a battery of tests were arranged and standardized, capable of being given to a large group of indi-

"Haggerty Intelligence examination, Delta 2; National Intelligence tests, Scale B, Form 1.

viduals at the same time, and of being rapidly and accurately scored by individuals who need have no knowledge of the tests themselves, nor ability greater than that of reasonably intelligent and conscientious clerks. Further, these tests are notable because they were given to a very large group of individuals, and demonstrated ultimately their intrinsic worth as an instrument for discovering the mental ability of those tested and for classifying such individuals in such a way as to be of practical service in the organization of the United States Army.

IV.—ARMY BETA TESTS.

As has been previously stated the Army Alpha test was found to be applicable to only about 7 men out of 10 tested, since nearly 30 per cent of the draft Army could not "read and understand newspapers and write letters home." For these illiterates as well as for foreign-born men who knew little English, a new type of test was necessary. This was designated as the Army Beta. This latter consisted of seven tests as finally perfected, although originally eight were included to correspond to Alpha.

The first of the Beta tests requires the subject of the examination to trace with a pencil the correct path through five increasingly complex mazes represented on paper. The *maze test* was first used nearly a quarter of a century ago to measure the learning ability of white rats and other brutes. Later it was reduced to the paper and pencil form and used in experiments in human learning. To-day it is found in a number of group intelligence examinations, following in this respect the form used in the Army Beta¹² or a variation containing the essential principle. This test requires foresight and planning and can be varied from a simple problem-solving test to one of great complexity.

The second test in Beta is styled *cube-analysis*. Sixteen pictures of cubes arranged in piles are shown, and the subject of the test is required to indicate the number in each pile, varying from 2 to 50. In the first four piles, all the separate blocks can be seen on one or more of their faces. As the number increases, the blocks entirely hidden become more numerous. Thus this becomes a problem in visualization of an increasing degree of complexity. When visualization fails, inference and reasoning are necessary. This test is closely related in principle to a number of the tests found in the Stanford-Binet. Visualization tests in various forms are employed in recently devised intelligence tests. Dearborn, Series 2, grades 4-9, employs this test in the Beta form. In his primary ex-

¹² See:

Mentimeter 2; Dearborn, series 2, grades 4 to 9.
Otis, primary 1, Form A.

If the following words were seen on a wall by looking into a mirror on an opposite wall, which word would appear exactly the same as if seen directly?

The third Beta test is given the title, X-0 series. It is essentially a *symbol series completion test*, in principle the same as the number series completion test in Alpha. Like the other tests in the Alpha and Beta examinations it begins with something very simple and progresses in complexity. There are 12 separate items.

[illegible]

X	X	X	X	0	0	0	X	X	0	X	X	X	X	0	0	0	X	X	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

The fourth element in the Beta series is the *digit symbols test*. At the top of the test are arranged the ordinals from 1 to 9 inclusive, and under each is placed a simple symbol, an *O*, an *X*, a *U*, a dash, an equality sign, etc. Then follow four rows of digits arranged in irregular order with blank spaces under each digit. The test requires the placing of the appropriate symbol under each digit. This is one of the various forms of the *key substitution test*, an example of which has already been indicated in discussing the code test for the adult level in the Stanford-Binet. This test appears in various forms in a number of recent intelligence examinations.

¹² For typographical convenience, only 3 blanks are shown.

symbol test. In all these tests, however, the fundamental principle is the same.

Test five in the Beta is a *number checking test*. A paired series of 50 numbers are presented. In half the series the first and second part of the pairs are identical, in the other half there are differences. The subject is required to check the identical pairs. This test is similar to test 4 in the Alpha, which, as already pointed out, is related to the various likeness and difference tests of the Stanford-Binet scale, and to the many forms of the same and opposites tests that have later developed in group testing. Many of these, as pointed out above in the discussion of the Alpha same-opposites test, have closely followed the Beta model, requiring the identification of names, symbols, and numbers. The number checking test has also been used in trade tests measuring the probable abilities of clerical workers.

The sixth element of the Beta series is a *picture-completion test* of 20 items. This type of test has already been discussed in our consideration of the Stanford-Binet examination, and as has been pointed out it is finding extensive use to-day in group tests devised particularly for children in the lower school grades.

The seventh element of Beta is called "*geometrical construction*." It is an adaptation of the form-board test reduced to pencil and paper. There are 10 separate items, each item consisting of a blank square at the left, and various smaller geometrical figures at the right. These smaller figures fit exactly into the square if properly placed. The subject of the test is to indicate by drawing lines in the square just what this arrangement should be. This test is found also in Mentimeter 2, the instructions reading: "Draw lines in the large figure at the right in such a way as to make of it the small figures at the left." A similar test is found in Dearborn, Series 2, grades 4-9.

V.—RECENT GROUP TESTS.

In the Stanford-Binet and in the Army group tests are to be found in some form most of the elements employed in the group tests now in use. Some of these parts have been taken over without change, while others have been modified in various respects. However, certain elements in recent group tests are sufficiently unlike those found in the earlier tests to warrant description and comment.

One of the most important of these is the *sentence completion test*. This test was devised by Ebbinghaus about 1905 in connection with his investigations of fatigue among school children in the city of Breslau, Germany. As used by its originator the test consisted of a paragraph in which syllables were elided. The child

was required to supply these omitted syllables. Terman later used this test but omitted words in the place of syllables. He did not, however, include it in the Stanford-Binet. This test subsequently appeared in the form of a series of sentences in which the omissions became more and more difficult to supply. In this form it was standardized by Trabue as a language test, and again worked over and restandardized by Kelley. In its present form it appears to be one of the best measures of intellectual ability that have so far been devised.

A typical form of this test appears in Miller's Wisconsin examination. Twenty sentences are given, ranging from easy to difficult, as, for example:

1. The dog ——— black.
20. ——— should prevail in churches and libraries.

It is found in this same form in nearly a dozen other examinations.¹⁴

This test is used in its original form as devised by Ebbinghaus (word completion) in the Pressey Indiana Mental Survey, Scale 1. It is combined with an opposite test by Dearborn,¹⁵ as follows:

Supply words meaning the opposite of underlined words:

1. We had a hot summer and a ——— winter.
24. The ignorant believed; the ——— ———.

He also uses it in connection with disarranged proverbs in the following way:

Rearrange and supply the missing words:

1. In time saves stitch ——— ———.
10. Does make a swallow not one ———.

One of the objections in the use of this test is encountered in the fact that it is difficult to score on an absolutely objective standard, since it is frequently possible to make completions reasonably sensible by employing any one of a number of words. Take for example the following sentence: "A ——— man ——— not invest ——— in ——— securities."

It may be filled in thus: "A *wise* man *will* not invest *money* in *wildcat* securities." Or thus: "A *foolish* man *does* not invest *money* in *sound* securities." Or thus: "A *business* man *should* not invest *much* in *speculative* securities." Or thus: "A *poor* man *can* not invest *earnings* in *expensive* securities."

These variations may be multiplied almost indefinitely. Evidently some of the substitutions that make sense are better than

¹⁴ See particularly: National, Scale A, Form 1: Whipple's Grammar Grades; Smith's University of Montana, High School and College Test; Smith College Intelligence Tests; Thurstone College Tests; Thorndike High School Seniors and College Freshmen Tests; Brown University Psychological Examinations.

¹⁵ Series 2, grades 4-9.

others, but how much better? It is here that the opinion of the person correcting the test plays an important part, and introduces an element of uncertainty into the scoring. In order to avoid this uncertainty the following variation of the test is used in Otis Advanced Examination, Form A:

Once upon a ——— there was a ———. (time, place, man.)

The person taking the test is instructed to underline the word in the parentheses that belongs in the blank space. A similar device is used in the Smith College Test, Series 2. While this method makes the scoring of the test entirely objective it materially changes its character and greatly reduces its difficulty.

Another important test that has been added to recent group intelligence examinations is taken directly from one of the school attainment tests. It is a *reading test* and appears in a number of forms. In the Thorndike High School Senior and College Freshmen Examination, a paragraph of rather difficult prose is followed by a number of questions based on the paragraph. This same form is used in the Batson South Dakota High School Tests. In Menti-meter 2 the test is as follows:

If the oscillation of the pendulum were not facilitated by any other force than gravity, what would be the effect upon their amplitude? It would gradually be flagellated, augmented, swaged, diminished.

Check the best reply.

Although this is classed as a reading test it is at the same time a range of information test, a vocabulary test, and a directions test. However, reading is such a complex activity that it is difficult to employ a test that measures it in any simple and direct way.

In the various forms of the Binet test and in the Army tests some attempt has been made to measure what may be termed, for want of a better name, *rational ability*. However, as has already been pointed out above, many items in these tests are not concerned in any direct way with complex mental processes. In recent group tests a number of elements are found that are specifically intended to measure these abilities. Some have a place in the earlier tests already discussed, while others are novel in form if not in principle.

Among the tests that seek specifically to get at the element of thinking in a response to a mental examination, those which are relatively independent of specific past experience should be given an important place. Many tests that involve reasoning ability are so tied down to detailed knowledge that it is difficult to determine how much is actually due to acquisition of a definite sort and how much is due to the factors of analysis, selection, judgment, and so on.

For example, the *essential attributes* test, quite frequently employed in various forms¹⁶ demands abilities that go beyond mere memory and knowledge of facts and of words and their significance. However, it is essentially conditioned on such knowledge. An example of this test is as follows, taken from National, Scale A, Form 1:

In each row draw a line under each of the two words that tell what the thing always has:

1. Elephant (circus, ears, hay, keeper, trunk).

24. Fiction (falsehood, hero, imagination, impossibility, invention).

A variation (Otis Self-Administering, Higher Examinations, Form A) instructs the person taking the test to cross out among a number of words the one which does not belong in the series, as follows:

A bird does not always have (?)

1. wings, 2. eyes, 3. feathers, 4. a nest, 5. a bill.

The essential attributes test is the same in principle as the various *classifications tests*, previously discussed. In the majority of these, verbal knowledge plays a very important part.

¹⁶ See: National, Scale A, Form 1; Pressy Indiana Mental Survey, Scale 1; Whipple's Grammar Grades; Otis Self-Administering, Higher Examinations, Form A.

CHAPTER XXIII.

EDUCATIONAL SURVEYS.¹

By EDWARD FRANKLIN BUCHNER,
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CONTENTS.—Introduction—State and Territorial surveys—County and rural surveys—City surveys—Special phases in city surveys—Training of teachers for public education—Higher educational institutions—Foreign survey—Unpublished surveys.

INTRODUCTION.

In course of the years preceding 1918, the educational survey in the United States had passed through several phases. Each of these trends in the movement was apparently inevitable, and essentially experimental in discovering the possibilities and the limitations of this new instrument for measuring and promoting educational progress. The definition of community attitudes, the justification of the new expense involved, the value of a special, synthetic view of the facts in school systems, the propriety of "outsiders prying into home affairs," the provincialism that hesitated to be transformed into a nationalizing democracy, a more or less limping technique, and the absence of any established principles to guide in the formulation or the acceptance of proposals for betterment—all these were elements in educational surveying which must needs come to light amid the countercurrents of belief and doubt, friendliness and opposition. By repeated efforts, and even unrelated trials, the survey came in the course of these years to find itself validated as an acceptable agency of progress, both in lay and in professional judgments.

¹This bulletin is the fifth report in the special series presenting a record of the educational-survey movement. In the report of the Commissioner of Education for the year ended June 30, 1914, Ch. XXIV, vol. 1, pp. 513-562, and also June 30, 1915, Ch. XVIII, vol. 1, pp. 433-492, appeared the first two reports of school surveys in the United States. The educational inquiries and surveys, the reports of which, with two exceptions, had been published up to the close of each of the two years, respectively, were analyzed with reference to the place and time, the authorization, the details of the staff, the situation leading to the inquiry, the method and scope, and the fundamental problems investigated, with a summary of the more important findings and the recommendations.

The third report, appearing in the report of the Commissioner of Education for the year ended June 30, 1916, Ch. XXI, vol. 1, pp. 353-371, included those surveys of which the reports had been published during the year, under review or were in process of publication, and listed those surveys the reports of which remained unpublished. The fourth report, issued as Bulletin, 1918, No. 45, (advance sheets from the Biennial Survey of Education in the United States, 1916-1918), presented an account of the surveys which had been published during the biennium 1916-1918, or were in process of publication, and listed those which it was expected would not be published. This fifth report is prepared with special reference to the biennium 1920-1922; but, for the sake of continuity with the material in the preceding reports, it includes the relatively few surveys made in 1918-1920. The surveys within each classified group are arranged in historical order. It is believed that this enables the reader to detect more readily the subtle changes which are appearing in the movement.

Then came the World War and the necessity of living somehow through the postwar conditions. Under such sensitized situations, the survey as an agency of progress was about the first to be lost sight of. The biennium of 1918-1920 was anything but prolific in school surveys. The few that were under way were carried forward to some sort of conclusion. As soon as school activities began to regrip themselves, special problems, created in part by the cessation of constructive efforts among schools during the war, emerged, with particular claims for attention. The survey was then called back, as it were, and the movement was resumed with vigor. There has since come a clearer picture of the changing conditions under which the schools of the Nation must proceed to do their work, with the demand for more manifest effectiveness.

The period of reconstruction tempered the movement, so that it now is less insistent on seeing speedy, wholesale changes, and proposes instead "a program" projected for fulfillment over a period of years. A new attitude has made its appearance on the part of individual surveyors and surveying agencies. The earlier attitude was to reveal a defective school situation, throw forward the survey results, and after decamping, leave it all with "the home folks" to treat as they pleased. The newer spirit expresses itself more uniformly in a conscious effort to see survey insights transformed into changed activities, to care for a "follow-up program," and to give such help as is needed in securing such new adjustments as will vindicate the efforts of the authorities and guarantee better opportunities for the children.

The continuance of the belief in the survey as an agency of educational progress and the full recovery of the movement after its war-time interruption are equally manifested by an increase in the number of reports appearing during the biennium of 1920-1922, and by the increase in the number of surveying agencies participating in this type of work. The United States Bureau of Education continues to set forth its firm belief, both by theory and by practice, that by conducting surveys and publishing reports it is discharging one of its main functions, in accordance with the creative act of 1867. The reorganization of the State Department of Education of Pennsylvania by which alone it was enabled to undertake one of the largest surveys completed; the undertakings of the George Peabody College for Teachers; the readiness of the departments of education in State universities to assist their constituent communities; the establishment of the Institute of Educational Research, with its division of field studies, at Teachers College, Columbia University, already engaged in surveys; and the recent announcement (December, 1922) by the General Education Board of its creation of a division of school surveys

which will extend the work already inaugurated—all indicate the larger task that remains to be done toward educational improvement and the spirit of communities to make progress when shown the way. The steady improvement in surveying technique which has appeared in connection with the contributions from researches in education will ere long not only enable but force us to grade surveys into classes as qualified by their respective types of performance.

STATE SURVEYS.

Delaware.—On April 14, 1919, the Governor of Delaware approved the new school code which had been adopted by the legislature of that State subsequent to the presentation of the report of the educational survey made by the General Education Board in accordance with the legislative act in 1917.² The topics covered in the survey included:

Its people and industries; the present school system; State board of education and commissioner of education; county school commissions and county superintendents; district school committees and boards of education; the teachers; the schools and their work; enrollment and attendance; financing the schools.

The description of conditions found to exist was carried forward in such a way as to indicate the nature of the changes that should be made, the recommendations being "designed to bring about, not an ideal state of affairs, but such improvements as are, at the moment, desirable and practicable," to the end that the State might "at once obtain an intelligently organized school system."

The school-plant situation in Delaware was analyzed and presented in detail in two reports, which were published by the Service Citizens of Delaware, in August and in October, 1919, the preparation of the reports having been made by Drs. George D. Strayer, N. E. Engelhardt, and F. W. Hart. They were intended as an incentive to the undertaking of a thorough rebuilding program.

Massachusetts.—On January 9, 1919, the special commission on education, which had been authorized by legislative action on June 1 preceding, presented to the legislature a report (Senate, No. 330, 1919, 197 pp.) of its investigation of the educational systems of the Commonwealth. The commission was called upon to make note of—

the support, supervision, and control of all educational institutions and undertakings maintained directly by the State, or jointly with cities, counties, and towns,

and to present—

its findings and recommendations as to the best methods and plans for the proper coordination of public education in the Commonwealth.

² Public Education in Delaware; with an Appendix Containing the New School Law. General Education Board, 1919. 202 pp.

By means of numerous special hearings and conferences it came into possession of information and suggestions relating to these three main aspects:

What is Massachusetts doing educationally and how is she doing it? What ought Massachusetts to be doing educationally and how can she best do it? What money is necessary to do it and how can that money be raised?

The recommendations, expressed in appropriate bills submitted for legislative action, proposed:

Desirable changes in the curriculum; raising the school age; continuation, vocational, and trade schools; vocational guidance; physical education and medical inspection; evening schools; university extension; minor wards of the State; State certification of teachers; minimum salary, \$650, for teachers; annual school census; State attendance officer; distribution of school funds; education of the deaf and blind; education in correctional institutions; textile schools; normal schools; the agricultural college; greater flexibility in college entrance requirements; Americanization; reorganization of the State board of education; incorporation of educational institutions and degree-granting privileges; State director for school libraries; the care, construction, and repair of school buildings; fire prevention in schoolhouses; and powers and duties of school committees and superintendents of schools.

Alabama.—The time limit within which was completed the survey of educational conditions in Alabama, made under the direction of the United States Commissioner of Education,³ is especially interesting as showing how quickly a serious-minded people can learn, to a large extent, the exact conditions under which education is proceeding among themselves. Legislative authorization for this survey was completed on February 6, 1919, the field work begun on March 12 and completed on May 31, and on June 11, 1919, the report of the survey presented to the Alabama Education Commission. The prompt completion of "the task of making the scientific study of the entire public-school system of Alabama" was effected by the assignment, under the direction of Dr. H. W. Foght, of the unusually large number of 21 persons, distributed through the different divisions of the undertaking. A new feature in survey procedure appeared in this study, whereby an advisory committee of four representatives of various phases of higher education was associated with the regular staff of the Bureau of Education for the investigation of the higher institutions, thereby evidencing additional caution in the procedure of surveying. The exemplary thoroughness with which the hurried undertaking was completed is indicated by the wide scope of the topics selected for report:

Alabama, the land and the people; fundamental educational needs as indicated by character and resources; history of public education; organization of the State system of education; county supervision of schools; school population, enrollment, and attendance; the rural schools; some (9) typical counties; Negro education in rural Alabama; village and town schools; the district agricultural schools and county

³ *An Educational Study of Alabama.* U. S. Bureau of Education, Bulletin, 1919, No. 41. 523 pp.

high schools; the city schools; institutions for defective, delinquent, and subnormal children; illiteracy and its eradication; special phases of home-economics teaching; health and physical education; home and school gardening; the teachers and their certification; preparation for public-school teachers in the State normal schools; higher education in Alabama; administration of higher education in Alabama; State support of higher education; financing the schools; what the State invests in public education.

The numerous recommendations of desirable changes growing out of the study of conditions are conveniently summarized in the last chapter.

Virginia.—The outstanding points of interest attached to the survey of public schools in Virginia are to be found in the demonstration of what happens to a system of education under a constitution which undertakes willingly to go into particulars in school matters, the happy outcome when public and private agencies and resources combine on a project of such large dimensions, and the survey benefits which arise from an effective organization of the enterprise itself. The Assembly of Virginia in 1918 authorized and provided an appropriation "for a careful study of school conditions in the State as a basis for report and recommendations to the assembly of 1920." The organization of the survey was based upon the decision—

that the best results could be obtained by having an eminent specialist in education from out of the State direct a field survey staff made up of Virginians acquainted with local sentiment and local conditions.

Dr. A. Inglis was appointed director, under whom were associated 10 division specialists, 22 special collaborators and members of the field staff, and 9 special consultants and advisors, constituting a total survey staff of 42 persons. The effective organization to accomplish the work of the staff in ascertaining the status and needs of education in Virginia is indicated by the organization of the following 11 divisions: Organization and administration, buildings and equipment, attendance and enrollment, course of study and instruction, teacher status and training, tests and measurements, Negro education, finances, physical education, vocational education, school organization.* The extent of the very complete reorganization of public education in the State that was deemed necessary and desirable is indicated by 11 principal needs as follows: "Imperative"; the school term must be lengthened; an effective compulsory school law must be provided; grading and school organization must be improved; better trained teachers are needed; provision must be made for an expansion of the instructional program; consolidation must be increased; the school plant must be improved; better supervision must be provided for rural schools; State and local systems of administration must be changed; the financial support of public schools must be greatly

* *Virginia Public Schools. Part I, Reports of the Commission and the Survey Staff; Part II, Educational Tests.* New York, World Book Co., 1921.

increased; the methods of raising and distributing school funds must be changed. Seven groups of constitutional amendments and 16 groups of amendments to school statutes are accordingly proposed.

The second volume of the report, *Educational Tests*, takes high rank in the literature of educational surveys and educational measurement, in many respects comparable to the volume on *Measurement of Classroom Products*, by S. A. Courtis, of the Gary public schools survey. The educational tests, made possible by the generous cooperation of the General Education Board, were carried out under the special direction of Dr. M. E. Haggerty, the data being collected in the early part of 1919. The Virginia survey becomes conspicuous because of the extensive rôle played by educational measurement, organized from the standpoint of a State situation, the chief ends of which were:

First, to measure by standard tests the results of instruction; second, to establish standards of accomplishment for certain educational conditions peculiar to the South and exemplified in Virginia; third, to stimulate teachers and others in the State to an increased interest in an understanding of the modern educational methods involved.

Over 16,000 different school children, with from 6 to 40 tests each, selected to represent various types of schools in different parts of the State, were tested in achievement and general mental ability. Pupils in all the grades from one to seven in city and in rural schools and in the first year of high-school work were given the following tests:

Reading: Thorndike reading scale, Alpha 2; Virginia reading test; Sigma 1; Virginia general examination, Delta 2, exercise 1.

Spelling: Ayres spelling scale.

Handwriting: Starch scale for measuring handwriting.

Arithmetic: Woody arithmetic scale, series B; Courtis standard arithmetic test, series B; Virginia general examination, Delta 2, exercise 2.

Composition: Nassau County supplement to the Hillegas composition scale.

Algebra: Hotz's first-year algebra scales, series A, addition and subtraction, equation and formula.

Mental abilities were studied by the psychological tests offered in the intelligence examination, Delta 2 (grades three to eight), information examination, Delta 1 (grades one and two), and an abbreviated form of the Stanford revision of the Binet-Simon tests. The investigation in high-school composition resulted in the construction of a new scale designated as the Virginia Supplement to the Hillegas Scale for the Measurement of Quality in English Composition (pp. 213-222).

California.—The forty-third session of the Legislature of California (April 26, 1919) created a special legislative committee—

whose duty it shall be to investigate * * * the plan of education in this State, and the regulations of schools, high schools, junior colleges, normal schools, technical schools, colleges and universities, and the cost of education, and to report their

findings in full to the forty-fourth session of the legislature and to make such recommendations in connection therewith as they deem of permanent benefit to the State.

The committee held sessions in different parts of the State and conducted hearings "to secure the attendance of representative of taxpayers' associations, labor unions, and laymen, as well as those directly interested in public education." The findings and conclusions of the committee were drafted by Dr. E. P. Cubberley into the final report (December 14, 1920). This inquiry shows an overshadowing influence of the Ayres index number, and addresses its attention to the five problems of State educational organization, county educational organization, the problem of teacher training, high school and junior college, and a better equalization of fund. The consideration of each resulted in specific recommendations, all of which may be put into operation by securing such legislation as will incorporate two amendments to the constitution and several new laws or revision of existing laws.

North Carolina.—The report growing out of the creation of a State educational commission by the general assembly, 1917, presents an interesting and attractive variation in the literature of education surveys. The work of the survey, which was undertaken by the General Education Board, with the help of all the school officials of the State, was completed in October, 1920, the findings and recommendations of the commission being presented to the general assembly in the year following. The story is given a forceful touch by the use of the editorial "we." On nearly every page the North Carolinian reader finds himself included in the recurrent "our public schools" this and that, and the publicity feature of surveys is given a new mode of expression. The first consideration is given to "the schools as they are," including educational progress, building and equipment, courses of study and length of school term, the teachers, and instruction. The "hindrances to development" were found to include administrative handicaps and limitations and conflicting developments. "The way out" is shown to be by means of better administration, better trained teachers, and better financial support. Five introductory pages of the report,⁵ by State Supt. E. C. Brooks, detailed the educational legislation which followed the chief recommendations growing out of the study.

Kentucky.—This is another State survey made under the now well-defined cooperation and constructive procedure of the General Education Board. The law under which the Kentucky Educational Survey Commission organized, on May 11, 1920, and proceeded with

⁵ Public Education in North Carolina: A Report to the Public School Commission of North Carolina, Gen. Educ. Bd., New York, 1921.. 137 pp.

the undertaking is a novel instance of the completeness of survey authorization, specifying as it does as a finable offense the conduct on the part of "any person who wilfully withholds records or information within his possession or obstructs the work of the commission in any way." Although the law required the employment of experts not residents of Kentucky, Dr. F. P. Bachman, local director, and his outside staff, enjoyed the active cooperation of educators in the State during the 15 months required to complete the work.* The recorded data were derived from selected counties, graded school districts, and cities, thus offering extensive representative samplings as a means of arriving at a statement of the real situation in the Commonwealth as a whole. This survey is also interesting as being another instance of checking up a description of the existing conditions in the schools by appraising their efficiency. This was done by noticing pupil progress and by measuring pupil achievements. Tests were given between November and the mid-year in reading, spelling, arithmetic, and history, special selection being made of the fifth, seventh, and eighth grades of the elementary school, in order to rate Kentucky pupils in terms of accepted standards; and, in particular, to compare results in this State with those recently discovered in North Carolina and in Virginia. It was revealed that measurement and description were mutually corroborative.

The testing program included high-school pupils who were tested in reading and algebra, the purpose being to find out their particular abilities, and, particularly, to evaluate the work in the elementary school in qualifying children to do high-school work.

Arkansas.—It was owing to the earnest "desire to do something in a permanently constructive way that will give the children of Arkansas the advantages which they need and to which they are justly entitled" that Gov. J. C. McRae, in September, 1921, following the report of the study of educational conditions at the University of Arkansas (see below, Higher Educational Institutions, Arkansas), presented August 31, 1921, appointed an honorary educational commission of 28 citizens, which was directed to have a survey made which should include "the entire public educational system" of the State. The university survey "lacked much in practical effectiveness, because there was not at the same time a comprehensive statement of conditions in the whole public-school system of the State, of which the university is the head." In the absence of public money for this undertaking, "funds were provided by public subscription through the Forward Education Movement and the Arkansas Educational Association," the minimum being \$10,000. Thus was undertaken the third survey study in this State under the direction of the

* Public Education in Kentucky: A Report by the Kentucky Educational Commission. Gen. Educ. Bd., New York, 1921. 213 pp.

United States Commissioner of Education. The survey staff of 16 members, under the direction of Dr. W. T. Bawden, included 12 persons from outside the Bureau of Education representing seven widely separated States. Most of the field work, representing 50 of the 75 counties, was done in November and December, and the report of the Commissioner of Education was made October 6, 1922.¹ The significant features of education in the State are presented in this order:

Development of educational legislation in Arkansas, school revenues and finance, organization and administration, the teachers, the rural schools, urban and village schools, secondary education and the district agricultural schools, education for negroes.

The survey reveals numerous gaps in the development of educational facilities during the 48 years since the constitution of 1874, which throw light upon the low rating accorded the situation, and accordingly recommendations are made which would abolish the system of school districts and increase centralization by placing "upon the State the responsibility for equalizing educational facilities and opportunities, and school tax burdens, throughout the State." A 10-year program of public education is projected under a reorganized department of education which should secure a realization of these 11 objectives:

Unification of general control; determination of the objectives of the State system and program of education; definition of functions and responsibilities of the component parts of the State system of education; coordination of the activities of the various parts of the system; determination of the minimum standards which shall prevail from time to time; adequate financial support; preparation of an annual budget; selection, training, and certification of personnel; progressive development of education in the State; continuous study and advocacy of needed educational legislation; publicity, for the purpose of keeping the people informed as to the achievements, objectives, and needs of the schools.

The report introduces an interesting mode of using ratios to indicate either the relative position of education in a State or the magnitude of the "task ahead." "In order to bring school conditions in Arkansas up to the average of the 48 States," different school accomplishments must be achieved in different amounts, as, e. g., high school enrollment must be multiplied by two, investment in property must be multiplied more than threefold, the annual cost of education for current expenses per pupil enrolled must be increased threefold, and the cost of new buildings on the same basis increased more than one hundredfold. The attainment of these objectives is set up as the goal of the proposed 10 years' program. The honorary commission submitted the survey report "to the people for their frank and unbiased consideration" for discussion at the meeting on

¹ The Arkansas Survey Report. (Abridged) Jour. of the Ark. Educa. Assoc., vol. 6, no. 3-4, July-October, 1922, 83 pp.

November 9 of the citizens' section of the State Educational Association, after which specific recommendations to the governor were to be formulated.

Oklahoma.—The report of the educational survey in this State reveals the extraordinary struggles, deflections, and checks encountered in the attempt to provide for and develop a real system of public education in one of our youngest Commonwealths. It comes as an instructive rebuke to an overweening confidence in the constructive power of chance imitation, as sprinkled with an assumed ever-present sufficient "common sense," as a reliable means of establishing and promoting educational facilities in an American State. In its discovery of startling inequalities, the survey shows almost unbelievable gaps between the existing situation and what should be as indicated in the scope of the suggestions and recommendations looking toward such reorganization and administration as will eventually bring the State near the level of the national average. Special interest in this study is due to the late entrance of the State into the Union (1907) and the complicated changes in its previous legal, economic, and social factors growing out of its tri-racial groups, the Indians, the whites, and the Negroes. No less a factor than the educational responsibility of the Federal Government makes its important showing in its relation to part of the existing situation. And, by duly taking heed of the chief results of this study, the State will be greatly advantaged by having had this survey so shortly after coming into Statehood.

Under legislative authorization in 1921 the educational survey commission requested the United States Commissioner of Education to arrange for and conduct the survey. Dr. W. T. Bawden directed the work of the staff, which included 10 from the Bureau of Education, 2 from other United States bureaus, and 11 from 7 States other than Oklahoma. Among the activities of the study were the educational tests and measurements of an aggregate of nearly 27,000 pupils (358 in Indian schools), grades 3 to 12 in most of the tests, which were spelling, reading, handwriting, English composition, arithmetic, algebra, and intelligence, given in April-May, and the field work in 46 of the 77 counties in October-November. The literature of educational finance receives a contribution in the chapter presenting the "problems of financing public schools," with its intensive study of 9 representative counties. The report,¹ accompanied by a digest of 70 pages, presents its material in the following order:

Historical background; problems of financing public schools; financial and accounting procedure; organization and administration; higher education; the rural schools; village and city schools; education of Indians; education of Negroes; educational tests and measurements; summary of conclusions and recommendations.

¹ Public Education in Oklahoma. Bureau of Education, Dec. 11, 1922, 420 pp.

"Equality in education is a brief but accurate statement of the supreme educational purpose of every State in our Union." Under this measure Oklahoma ranks among the upper quarter of the States in her ability to provide, but mostly in the lowest quarter in her school performances. The four "chief causes of this deplorable educational situation" are cited as:

A defective system of taxation; a system of school finance which makes it absolutely impossible to provide adequate school funds; the district system; and an unscientific method of apportioning the State funds, which ignores both the ability and the effort of the local units.

Complete reorganization, with centralization in an effective State board of education, based upon the county unit system, so as to put into effect a unified system, is the chief dependence relied upon in the series of recommendations formulated. The survey procedure necessarily varied with the traits of each of the several groups of school problems studied, and there is apparent some repetition. Any true survey, however, must go over its material at least twice. The succinct and trenchant mode of using ratios to popularize a sense of the work to be done to bring education forward, appearing in the Arkansas survey, reappears in this report:

In order to bring about approximate equality of educational opportunity as between independent districts and rural districts in the State, Oklahoma must immediately multiply the percentage of the rural population in high schools by 4. The percentage of high-school teachers working in rural districts must be multiplied by 3. The money per capita being spent for buildings and grounds in villages must be multiplied by $2\frac{1}{2}$, in consolidated districts by 4, in union graded districts by $2\frac{1}{2}$, and in rural ungraded districts by 5. The percentage of the enumeration in attendance must be raised 7 per cent in village districts, 10 per cent in consolidated districts, 12 per cent in union graded districts, and 21 per cent in rural districts. The percentage of teachers holding first-grade certificates must be increased 34 per cent in village districts, 42.9 per cent in consolidated districts, 52.5 per cent in union graded districts, and 74.4 per cent in ungraded rural districts. Salaries of teachers in village districts must be increased by approximately 15 per cent, 30 per cent in consolidated districts, 50 per cent in union graded districts, and 64 per cent in rural districts. The school term in rural districts must be lengthened two months. Finally, such a ratio of adequately trained supervisors to teachers in rural districts must be provided that supervision is as intimate, as personal, and as regular as in independent districts.

Indiana.—"Indiana is usually regarded as among the States that possess a fairly good system of public schools. As a matter of fact, the State has in this matter a better reputation than it deserves." Such, in brief, is a finding of one of the most vigorous reports of an educational survey of a State system yet made, that of the Indiana Survey Commission, which was prepared under the direction of the commission by the General Education Board, Dr. F. P. Bachman, survey director.* The authorization of the survey by the general

* *Public Education in Indiana*, Gen. Educ. Bd., New York, 1923. 304 pp.

assembly, approved March 9, 1921, called for the report not later than April 1, 1922. Owing to the magnitude of the undertaking, a preliminary report of the progress was made on the date required, but the work of the survey was continued until its completion. The elements in the situation leading to the survey and the seven items to be investigated, as specified in the resolution, are among the most interesting forms of recent educational legislation. Among the former are "the low rating of the Indiana school system, creating much speculation as to the causes of this low rank and the needed measures for improvement," and the absence of "a thorough and scientific study, by direct and first-hand investigation, of the system of public education." The latter gave full sweep to a study of the public-school system, which included 1,917 townships, 134 towns, 98 cities, Indiana University, Purdue University, and the Indiana State Normal School. The commission gives full explanation of "why the material in this report is frankly critical and why so little space is given to noteworthy and praiseworthy features of our system."

This study shows a deviation from a common survey procedure which details the features of an educational system by launching directly into an estimation of the actual educational benefits which children are receiving. In suggesting its scheme whereby needed improvements may be effectually realized, the order is somewhat reversed. These features significantly appear in the order of topics, grouped under "present conditions" and "needed improvements":

Instruction and pupil progress in elementary schools; high-school instruction; teachers, training, licenses, and salaries; teacher-training institutions (Indiana State Normal School, Indiana University, Purdue University); buildings, grounds, and equipment; high schools; vocational education; local administration; State administration; financing the schools; better State administration; better local administration; better organization of schools; new license system and salary schedule; improved provisions for teacher training; equalization of school taxes.

In contrast with other surveys conducted by this agency the Indiana investigation is distinctive by reason of the great initial dependence placed upon the results of a testing program in pupil achievements. Standard written tests in reading, spelling, arithmetic, and history were given to 15,691 elementary pupils of the fifth, seventh, and eighth grades in January, and to 9,185 high-school pupils in English reading, and to 3,884 pupils in algebra. The results of measurement were taken as corroborating the quality of instruction as judged by observation, and led to the conclusion "that the primary educational problem of Indiana is the improvement of instruction in its elementary schools and in its small high schools." A valuable innovation in tabulating test scores which facilitated comparative studies of school work in rural, town, and city situations, as well as with other States, is to be found in their transcription into "terms of the grade of work they represent." This innovation

extends so far as to consolidate the average achievements of pupils in three subjects (Table 5) into single grade positions. Chapters I and II should come to occupy a high place in survey literature.

The constructive program suggested calls for greater centralization in a State board of education, the adoption of the county unit system, the extension of consolidated and junior high schools, improved provisions for teacher training, a new system of licensing teachers based upon a progressive salary schedule, and the equalization of school taxes. The suggested scheme for the apportionment of State school funds in order to do away with inequalities discovered in the State system is based upon five items: One half of State support to be distributed on the basis of the wealth back of each child to be educated, the other half to be distributed equally on the basis of a school census; the total enrollment; the aggregate days of attendance; and the number of full-time teachers.

Hawaii.—On July 15, 1920, the United States Commissioner of Education submitted the report of A Survey of Education in Hawaii, made under his direction (Bull., 1920, No. 16, 403 pp.). The survey was made at the request of the Governor of the Territory of Hawaii, the legislature, the school commissioners, and the superintendent of public instruction, the private schools being included at the request of representatives of these schools. The field work was done by Dr. F. F. Bunker, of the Bureau of Education, with whom were associated W. W. Kemp, P. R. Kolbe, and G. R. Twiss.

The report of this survey takes on a very special interest because of the geographical isolation of the Territory, its mixture of international elements, the larger proportions of which are oriental, and its economic relationships. The report is likewise interesting because of the definite objectives for a school system which are everywhere apparent in their work.

The Nation, through preparing, along with other agencies, dependable, patriotic, and worthy citizens; the community, through shaping the training it gives, so that the community will have competent leaders and efficient workers in all its occupations; the individual himself, through helping him to find his aptitudes and abilities and through providing him with the means for so developing these that thereby he is enabled to render a service alike satisfying to himself and to society.

One of the outstanding puzzles in the earlier stages of educational survey movement was concerned with the question as to how it would be possible to eliminate unfavorable local reaction to what was mistaken for critical observation, and, therefore, offensive reflections, upon a given school situation. An important change in attitude toward survey reports is indicated by this vital point made in this study:

A survey report may appear to be unduly critical when in reality it is only calling the attention of interested authorities, in an earnest way, to opportunities for improvement in a system genuinely sound in its structure and work.

The recommendations that emerge from the study appear concurrently with the analyses of educational conditions and resources so as to suggest the direction in which school practices may be so changed as to secure desirable results in meeting the citizenship needs of the Nation, the occupational needs of the community, and the fuller offering of opportunities for the development of the needs of the individual. The scope of the study includes:

An analysis of the educational problem of Hawaii; the organization, administration, supervision, and financing of the department of public instruction; the foreign-language schools; the teaching staff of the public elementary schools; classroom procedure, and the course of study of the elementary schools; the public high schools; the University of Hawaii; the private schools.

Educational Progress in Wisconsin, prepared under the editorial direction of Cecile W. Flemming, and issued by State Supt. C. P. Cary, in 1921, as his biennial report for 1918-1920, is strikingly illustrative of the wider adoption of certain surveying methods in the preparation of permanent official records. In addition to summarizing the departmental activities, carried forward during the biennium, and the progress made by the several types of schools in the State, the 23 chapters undertake—

to make some constructive suggestions for "next steps" which should be taken to assure the continued progress in education in Wisconsin legitimately to be expected on the basis of her previous achievements.

This study likewise shows the stirring influence of the Ayres index number for State school systems, the initial announcement being couched in these warning terms:

If the legislature wishes to have Wisconsin rate higher in the next report of this kind, it can accomplish that result only by passing laws that * * * assure better attendance and a larger expenditure of money.

COUNTY AND RURAL SURVEYS.

Pennsylvania.—A plan for centralizing seven small schools, with a total enrollment of 246 pupils, is set forth in *The Feasibility of Consolidating the Schools of Mount Joy Township, Adams County, Pa.*, by Katherine M. Cook and W. S. Deffenbaugh, of the Bureau of Education (Bull., 1920, No. 9, pp. 28). For the deficiencies observed in the ineffective organization and meager attainments of the separate small schools, consolidation is specified as "the obvious remedy." In light of the desirable educational changes brought about by consolidation of schools in other States, the study details some results which may be expected from applying the remedy.

Georgia.—With an increasing theoretical emphasis being placed upon the county plan as a more effective means in State and rural administration, each detailed study of the school system of such a unit offers a distinct contribution of data valuable in an impartial

study of the comparative values of this form of organization. To this end new material is made available in the report of the Survey of the Schools of Brunswick and of Glynn County, Ga. (Bull., 1920, No. 27, pp. 82), requested of the Commissioner of Education by the county board of education, and conducted by a committee of the Bureau of Education under the direction of Dr. F. F. Bunker. The report of the study was fashioned in a manner that could not have failed to impress those to whom it was addressed. The headings of the contents set forth at a glance the state of affairs and the recommendations:

Adopt a simple cost-accounting system of records; the superintendent should keep in orderly and systematic manner statistical information concerning significant matters relating to the schools; appoint an attendance officer on full time and require him to keep a cumulative school census; the holding power of the schools is low and should be increased; amend the special act under which the schools are controlled to provide for an elective board and to make the county a single taxation unit for school purposes; the system needs a stronger teaching staff and more effective classroom work; a new course of study should be prepared for the schools; the schools suffer because of inadequate financial support; the ability of the county to provide a larger maintenance income for its schools; to relieve the crowded buildings in Brunswick and yet keep within the limits of the bond issue the schools should be organized in accordance with the work-study-play plan; the board should adopt a comprehensive building plan; the showing made by the pupils of Brunswick and Glynn County in the standard educational measurement tests given.

The Georgia State program of studying conditions in given counties as units, as noted in former reports, has been consistently carried forward during the period under review, the list including the following counties:

No. 27. Warren, 1919. No. 28. Lee, 1920. No. 29. Miller, 1920. No. 30. Laurens, 1921. No. 31. Thomas, 1921. No. 32. Johnson, 1921. [No. 33.] Dublin School system (City), 1920-21. No. 34. Burke, 1921. No. 35. Walker, 1921. No. 36. Stephens, 1922. No. 37. Dooley, 1922. No. 38. Bacon, 1922. No. 39. Grady, 1922. No. 40. Wilkes, 1922.

The series continues throughout to rely upon the former procedure of giving a page to a school, with photograph, teacher, location, grounds, building, equipment, organization, maintenance, and occasionally, other items, with statement of data. Beginning with no. 28, M. L. Duggan, rural school agent, who has been responsible for these county surveys, has had the assistance of Miss E. B. Bolton. The general emphasis has been placed upon better financial support, consolidation, and more effective administration and supervision. Beginning with no. 29, Miller County, the series introduced the plan of giving tests in achievements in order to ascertain the quality of the work being done in the schools, the subjects tested being reading, spelling, arithmetic, language, and writing (with the exception of [no. 33] which is devoted entirely to the comparative results of tests

used in the city school system in Dublin, given in December and again in May). With no. 30, Laurens County, the survey program is notably extended by the addition of two rubrics, training and qualifications of teachers, and retardation and elimination, as shown by the age-grade distribution of pupils. These three modes of procedure, teacher qualifications, pupil progress, and tests, placed these surveys upon a definitely comparable and objective basis by means of which future progress will be hereafter more accurately known. The survey of no. 37, Dooley County, is especially characterized by the inclusion of the physical examination of its school children.

Colorado.—The Public Schools of Rifle, Colo.: A Survey, by O. B. Staples (February, 1920, 92 pp.), is another illustration of a local and cooperative survey growing out of the feelings of citizens and school officials as to the limitations and needs of their schools. The study was conducted between September 29, 1919, and February 1, 1920.

Its only purpose is so to acquaint the citizens of Rifle and vicinity with the outstanding facts which concern their schools as to enable them to act more intelligently and purposefully in adopting and pursuing a program of educational reconstruction.

In the following school year a similar effort toward progress, through cooperative school enterprise, was made in the educational survey of the Fruita union high-school district.¹⁰ The seven district school boards which cooperated in this undertaking united in saying:

Our only purpose in authorizing this work is the hope that the studies made and the recommendations proposed will result in building for this territory a school system adequate for our future needs and commensurate with our opportunities.

Ohio.—The Survey of Educational Conditions in Fairfield County, Ohio (1921, 53 pp.), by F. C. Landsittel, "was undertaken at the request of the State superintendent of public instruction [V. M. Riegel] largely for his information, but primarily for the benefit of the county surveyed." Twenty-three days were given to the field work in the autumn of 1920, much of the data being secured from reports furnished by superintendents in the county. The foreword suggests

that this bulletin may be used as a guide for county superintendents in the study and survey of school conditions in their respective counties. Knowledge of things as they are is a necessary condition precedent to the realization of ideals.

The topics treated are: Background; school population and attendance; curriculum; building and grounds; the teacher and his work; supervision; financial support; reorganization.

Minnesota.—The school survey of Arlington, made under the direction of Dr. J. B. Sears, which also includes a study of districts 14,

¹⁰ The Fruita Survey: An Educational Survey of the Fruita, Colo., Union High-School District, including School Districts nos. 2, 7, 23, 25, 27, and 37, by S. Quigley, M. F. Beeson, H. T. Manuel, and B. E. Tope. 1921. 106 pp.

16, and 30 of Sibley County, is an illustration of how the conduct of a school survey may be made the laboratory exercise of a university course of instruction.¹¹ The first half of the course in school surveys, given at the University of Minnesota, in 1920, gave attention to the principles and methods of such investigations. This survey was carried out in the second half year to provide actual field experience to the seven students in the course. The style of the report is noteworthy in that it is—

addressed particularly to the parents of the children in whose interest the study has been made * * *. These words are written to the fathers and mothers of the children, and each parent should understand that "this means me."

It explains, first, the educational needs of the community; next, the kind of school it now has; and, finally, a proposed plan of reorganization to provide fitting educational opportunities for the children.

Iowa.—A report which records the uses of measurements both in school subjects and pupil intelligence is to be found in *Surveying Rural Schools: Organization, Methods, Results, and Comparisons*, by Prof. F. D. Cram.¹² The purposes of the studies here reported were to secure answers to the following questions:

1. Are standard tests usable in rural schools, and if so, by whom?
2. What are the results of our campaign, as shown by the data secured?
3. What remedial steps can be taken, if any, to improve the unearthened conditions?

The material incorporated in the report was selected from tests made in Bath Township, Cerro Gordo County; Aurelia, Cherokee County; and principally in Black Hawk County, Iowa, and extended in time over 1919-1922. Tests were applied in reading, spelling, arithmetic, the National and the Otis intelligence tests, and the special series in the last county of nine tests: National intelligence tests; Monroe's silent reading; Form 1, spelling (Virginia Word List); handwriting (Ayres' Gettysburg scale); Cleveland survey arithmetic; Barnes-Courtis Locational Geography of the United States; History; Iowa geography test; and Charter's language test. Among the general conclusions, it was found that testing is possible in one-teacher schools, especially grades three to eight, inclusive, and should be carried forward only by such county superintendents as can secure sustained responses from their teachers.

New York.—How a sense of the need of acceptable information concerning various problems relating to school conditions over a wide area can quicken a number of agencies into effective cooperative activity is well illustrated in the adoption of a resolution by the Rural Education Conference of the 1920 Farmers' Week at the New York State College of Agriculture, following its discussion of the

¹¹The Arlington School Survey: Covering a Study of the Schools of Arlington and Districts 14, 16, and 30, of Sibley County, Minn. Bull. of Univ. of Minn., Vol. XXIV, No. 28, Aug. 10, 1921. 55 pp.

¹²Bull. of Iowa State Teachers' College, Vol. XXIII, No. 3, Part 1, July, 1922. 75 pp.

question, "What can be done for the improvement of rural schools in New York State?" and its subsequent history. In consequence thereof, the century-old scheme of rural education in this State was subjected to one of the most extensively organized surveys yet undertaken. The Joint Committee on Rural Schools included representatives of seven cooperative organizations: State grange, State department of education, dairymen's league, State farm bureau federation, department of rural education of the New York State College of Agriculture, State home bureau federation, and the State teachers' association. The organization of the survey, under the direction of Prof. G. A. Works, and with the financial support of the Commonwealth Fund of New York City, comprised seven sections with a director in charge of each: Administration and supervision, C. H. Judd; teacher preparation and curricula, W. C. Bagley; rural school buildings, J. E. Butterworth; the educational product, M. E. Haggerty; support of the schools, H. Updegraff; community relations of the schools, M. Carney; and reactions of rural school patrons, E. R. Eastman. The study of special topics was assigned to one or another of these sections. Because of their close relationships, the study included the State schools of agriculture, the junior extension work, and the State department of education in its relation to the rural schools. Assistance and cooperation, both lay and professional, official and personal, marked the progress of the work which included the elementary schools in the open country and of elementary and secondary schools in places under 4,500 population. The State was divided into seven areas, and data were secured by each section of the survey from each of these regions, under the principle of "random sampling."

This extensive study is characterized by the special attention given to the "reactions of rural school patrons," by the State-wide plans of publicity through "hearings" and discussions, which changed in character with the progress of the investigation and the emergence of its findings, and the consistent unity in the proposed scheme of rural education pictured in the wide-reaching recommendations. Continuing publicity in the form "of discussion in hundreds of meetings throughout the State" is an avowed aim in the preparation of the preliminary report.¹³

This general statement, possessing literary merit not common in survey reports, abounds in single and composite pictures of rural school conditions, which show clearly the great disparity between the opportunities of the country and of the city. New emphasis is

¹³ Rural School Survey of New York State: A Report to the Rural School Patrons, by the Joint Committee on Rural Schools, G. A. Works, chairman. Ithaca, N. Y., 1922. 272 pp.

It is designed that the full series of reports shall include eight volumes: II. Administration and Supervision; III. School Support; IV. Teachers and Teacher Preparation; V. School Buildings; VI. The Educational Product; VII. The Rural High School; VIII. Vocational Education.

placed upon the community as responsible for given situations by couching recommendations in such terms as that "better provision may be made *because the community believes improvement necessary.*" Expression is given to values and benefits arising from survey participation by recording the professional stimulus sensed by many of the nearly 200 school people who contributed to the field work:

Enough evidence of this character has been submitted so that the committee is convinced that, regardless of legislation such as it hopes eventually to see enacted, the reawakening that has come among rural school patrons and the stimulation of interest and broadening of vision on the part of those engaged in the teaching profession have been worth much more to the State than all time and money expended.

The committee finds the chief outcome of the investigations and the objective to be realized in its proposals presentable in this single conception:

The largest single educational problem in the State is that of equalization of educational opportunity for the country child as contrasted with the child who lives in a city or village of the State. This equalization should come not by lowering the standards in urban centers, but by the gradual development of more adequate schools for the open country.

The radical difference between the "is" characteristic of the survey, in describing conditions as found, and the "should" of a constructive study in rural education is brought to mind in a pioneer study by W. S. Deffenbaugh and J. C. Muerman, of the United States Bureau of Education, presented in their *Administration and Supervision of Village Schools*.¹⁴ In this study of school conditions in villages and towns in the United States having a population of less than 2,500 the authors call attention to a seriously neglected part of our national scheme of education. Their conclusions may be regarded almost as a formula, the application of which to given villages may be expected to bring about much improved school conditions:

The village school should be the community school, serving the farm child as well as the village child. The village school should not be independent of the township or county school system. The village school course of study should be based upon the life of the community. In the smaller villages only elementary and junior high-school work should be attempted. There should be a kindergarten in every village. The school grounds could well be 10 acres and serve as the village park. Every village school should contain a library, and its buildings should include, besides regular classrooms, auditorium, libraries, kitchen, and shops.

CITY SURVEYS.

Winchester, Va.—One of the most interesting of educational studies made since the surveying method defined itself is contained in *Private Endowment and Public Education: the Report of the Use of the Handley Fund*.¹⁵ The fulfillment of the time for accumulation of the fund bequeathed by John Handley to the city of Winchester

¹⁴ U. S. Bu. of Educ. Bul., 1919, No. 86. 63 pp.

¹⁵ Gen. Educ. Bd., New York, 1918. 77 pp.

brought forward the question as to the proper use of "the income arising from said residue estate to be expended and laid out in said city by the erection of schoolhouses for the education of the poor." This led the board of trustees of this fund to seek the aid of the General Education Board in answering the question. The assistance was rendered on the basis of a study which included the people and industries of Winchester, the schools, and their needs. It is interesting to note that the last six words of the bequest, "for the education of the poor," is thus rendered by the survey: "This phrase, when interpreted in present-day terms, must mean public education." In calling attention to the need of a complete reconstruction of the public schools of Winchester, the survey offers its argument in terms of a kind of "educational organization and opportunity approved by the most competent contemporary thought." In the further development of its suggestions for the use of the Handley Fund, a new interpretative principle is offered:

Private benefactions are best employed when they stimulate public interest and public participation in social enterprises that the public can not otherwise for the time being undertake. Such use fosters the development of sound public opinion, enlarges the field of public activity, and deepens the sense of public responsibility.

Binghamton, N. Y.—The report of the Binghamton school survey, by the State department of education, is particularly interesting in view of the fact that it treats of what is essentially an American city, the percentage of native white parentage being 62.9 per cent.¹⁶ The appearance of such a community is very unusual in the survey literature. The survey was requested by the board of education, and carried on during the school year 1917-18, under the direction of George M. Wiley and a staff of specialists of the State department of education. In expressing the hope that the study would assist "the citizens of the community in meeting the school problems of the next decade," the commissioner of education, Dr. John H. Finley, adds:

It is the type of constructive surveys which I hope the department will be increasingly able to give to the communities of this State. Indeed, I know of no higher service that the State can give through its educational department than to help each community to develop its school system in the best way possible, and to enable local initiative to take advantage of general experience.

The nine items receiving attention are: The city of Binghamton; organization and administration; the school plant; supervision; the teaching staff; course of study and instruction in the elementary schools; course of study and instruction in the high school; achievement in fundamental subjects as measured by standard tests; and finances. The high-school analysis was a feature of this survey, receiving as it did the largest amount of attention given to any

¹⁶ Report of the Survey of the Binghamton School System. University of the State of New York. Albany, 1919. 209 pp.

school topic, the measurement of achievements in fundamental subjects coming a close second. The subjects tested included the fundamental operations of arithmetic, composition, silent reading, spelling, and writing from grades four to eight, and, in a few instances, the third grade. The results of the testing showed that, although Binghamton is characteristically instructing American children, "the work is stronger in those subjects that are under the direction of special supervisors."

Utica, N. Y.—The third city school system surveyed by the State department of education of New York presented their conditions in a community which is quite the opposite from that of the preceding survey. The survey of the Utica school system follows the same plan as the preceding report, with the addition of health education.¹⁷ The survey was undertaken at the request of the chamber of commerce, the board of education concurring, the inquiry having been completed during the school year of 1917-18, under the direction of George M. Wiley and a staff of specialists of the State department of education. The study revealed that Utica, with two-thirds of its population foreign-born or of foreign-born parentage, was facing a distinctive school problem, and one which should have been of unusual interest to the educational authorities of the city. The report recommends considerable reorganization in administrative management, a more effective solution of the problems of the school plant, revision and extension of the courses of study, giving more attention to the manual arts, industrial arts, and to home science, to the end that the school program and activities shall reflect more vigorously the significant part which the industries fill in the daily life of the city.

Paducah, Ky.—The Survey of the Public-School System, Paducah, Ky., (August, 1919, pp. 164) is the work of a welcome new agency which has entered the active field of surveying. With a single exception, the 15 members of the staff were members of the George Peabody College for Teachers, whose labors were directed by Dr. T. Alexander. The scope of the study included administration and supervision, buildings and grounds, elementary schools, the high schools, physical education, music, home economics, and industrial arts. The results were embodied in 115 proposals designed to aid the board of education to carry out "its plan of making radical changes and improvements." Serviceable data are recorded of the results of tests given to white and to colored pupils in elementary schools in arithmetic, reading, writing, language, and spelling.

The survey was undertaken with the understanding that the recommendations of the survey staff would be followed out as far as practicable and that individual

¹⁷ Report of the Survey of the Utica School System. University of the State of New York. Albany [no date]. 230 pp.

members of the survey staff would be permitted to render assistance in the execution of its recommendations. (These) are intended for Paducah only and for this reason members of the staff were instructed to confine themselves entirely to a statement of the conditions as found and very explicit and direct recommendations for the improvement of such conditions. Accordingly a great many of the statistical studies and much of the philosophy of education, which have been included in many surveys, have been purposely omitted. * * * The survey staff stand ready to give teachers individual and collective assistance if requested to do so by the board of education.

Memphis, Tenn.—Because of the failure of a striking instance of civic enterprise and development to recognize the importance of the educational resources in a modern American city, the study of the school situation in Memphis acquires special interest. At the request of the city board of education, in April, 1919, the United States Commissioner of Education undertook the task of making a survey of the public-school system of that city under very specific conditions. The field work was accomplished between May 12 and June 7; and the publication, authorized on September 25, 1919, included the report of the survey staff, Dr. F. F. Bunker, director, with whom were associated 10 specialists in governmental bureaus and five specialists from other institutions.¹⁸ The form of this report is a notable instance of the effort of a survey to realize its full purposes, namely, of presenting technical details for the benefit of administrative and teaching forces, but also the needs of the citizen in appreciating and supporting the policy of educational reconstruction.

It is obviously necessary that the average citizen have an intelligent understanding of school conditions and school problems, since no public-school system can function successfully except as it is founded upon the educated public opinion of the masses of the people. For these reasons the Bureau of Education is publishing not only a detailed, more or less technical, report of the Memphis school survey, but also the present brief abstract of the report for the use of the average citizen who is interested in gaining a general knowledge of the findings of the survey, and whose intelligent interest is such an important factor in the work of the teaching force of the city, the school officers, and the board of education.

The survey of the city clearly indicates that, if the city is to grow and prosper socially and commercially, as much foresight and scientific planning must be spent upon the education of the children as has been expended upon the material development of the city. Conditions have changed, and education must be changed to meet these conditions. Are the schools of Memphis recognizing this fact?

The pointedness of the survey, which includes analytic and constructive study of the main features of organized school activities and discovers, as indicated by the great number of specific recommendations, that great changes are needed at every point, appears conspicuously in the "questions which the people of Memphis are

¹⁸ The Public School System of Memphis, Tenn.: Report of the Survey Made Under the Direction of the Commissioner of Education. Bull., 1919, No. 50. In 7 parts. Also An Abstract of the Report on the Public-School System of Memphis, Tenn. Bull., 1919, No. 72.

raising in regard to their schools" as detailed in the more popular abstract:

(1) Are the schools educating the children so that they can meet life as it is to-day, with intelligence, self-reliance, courage, and resourcefulness? Are the schools organized in the light of changed social and industrial conditions, or are they still conducted as though such changes had not taken place?

(2) Are the schools of Memphis developing in the children the spirit of initiative and the ability to think for themselves? Does the teaching stimulate thinking, or does it train merely in the capacity to give rote answers to questions?

(3) Are the schools developing the scientific spirit and the practical scientific knowledge so important in meeting the conditions of modern social and industrial life?

(4) Are the schools developing in the children general mechanical ability and adaptability?

(5) What are the schools of Memphis doing to preserve the best traditions of the South in the art of living and the love of beauty?

(6) Are the schools contributing to the development of the children's health through the opportunity for wholesome play every day, or are the children left to the mercy of the city street, with its physical and moral dangers?

Among the features of the survey may be noted the attention given the measurement tests in silent reading, spelling, and arithmetic to children of the two races; the suggested reorganization of both elementary and high school instruction; the special treatment of the newer subjects of civics, science, music, industrial arts, home economics, gardening, and health work; and specifically the greater economy and educational effectiveness of a building program based on the work-study-play plan of educational reorganization.

Boise, Idaho.—The report of the preceding survey strikingly emphasizes the extraordinary progress made in recent years in American city-school systems. The Boise survey, by Dr. J. B. Sears, assisted by W. M. Proctor and J. H. Williams,¹⁹ authorized April 17, 1919, and the field work accomplished in two weeks, is equally striking in noting specific points wherein the changing conditions in American city public education requires exceeding alertness on the part of the authorities and the school officials to keep the activities of the teaching staff and the children in the forward line of progress. This survey projects this conception of the more modern school:

that the school is not to be isolated from other social interests; that the teaching of reading, writing, and arithmetic are not its sole functions; that education has as much to do with real occupations, real civic and social duties and obligations, real people, real things, and real conduct of men; and, finally, that educational opportunities should be available for old as well as young.

The educational problem before this community is thus framed:

The city is able to have the best, and is morally responsible to a wide territory to furnish a demonstration of the best that can be worked out in educational practices in that part of the United States.

¹⁹ The Boise Survey: A Concrete Study of the Administration of a City School System. Educational Survey Series, Vol. IX. New York, World Book Co., 1920. 286 pp.

The detailed analysis of all the elements in the school situation led to a report which

calls for a larger teaching force; for more thorough supervision; for additions to curriculum; for added library and equipment; for better buildings; for greater attention to matters of health and physical development; for certain lines of reorganization; for the organization of special classes; for vocational and educational guidance; for night schools; and, finally, for the development of a junior college.

The educational leadership of this city, it is indicated, is possible by the readily available financial resources which will enable it "to get out of the 'average' and into the 'modern' group of city school systems."

Washington, D. C.—Data serviceable for comparative purposes in a plan for the reconstruction in a school system were rendered available in the preliminary survey of the schools of the District of Columbia, made under the direction of the United States Commissioner of Education.²⁰ The request by the board of education, in the District of Columbia, for prompt assistance is the reason for the restriction of the study wholly to questions of reorganization of the administrative and teaching forces of the schools, including the schedule of salaries, the report being made in October, 1920.

Locust Point, Baltimore.—An illustration of the application of educational survey methods in the study of a single school and the economic resources and educational needs of its very special community is found in the report by C. A. Bennett on The Francis Scott Key School, Baltimore, Md., (Bu. Educ., Bul. 1920, No. 41, 31 pp.). The school population of nearly 800 children, elementary school, kindergarten, and ungraded group, supplies the educational needs of a curiously restricted industrial and shipping peninsula which continues to be a residence section. This study was consequent upon the pathfinder survey in 1914, and, more recently, the advice of former United States Commissioner of Education Dr. P. P. Claxton, whose cooperation was sought in regard to

the reorganization of the school to meet more effectively the needs of the children and the adult population of that section, and to suggest plans for a building to be so constructed as to adapt it to the use of the school so reorganized. This study * * * is an effort to break through the wall of school tradition and get a view of community educational needs unhampered. It does not ignore school experience or discount its value in solving new problems.

A study of the conditions at Locust Point reveals that only about one-half of one per cent of these children ever go to high school, that most boys and girls leave school and go to work as soon as they reach their fourteenth birthday, that most of the work-certificate children have little chance to learn a trade, and that there is a great lack of facilities for industrial training.

²⁰ U. S. Bu. of Educ. Bul., 1920, No. 36. 15 pp.

The proposed changes include provision for what "might be called an intermediate school" for all children 13 years of age or older, and all others who have reached the sixth grade, to be organized on a departmental plan in which industrial training, physical training, and recreation are to rank equal with other subjects; and the organization of cooperative part-time classes and the addition of a one-year trade or vocational course to follow the eighth grade. Further changes are suggested in the addition of more industrial work for slow and subnormal pupils and the organization of evening trade or vocational classes for those who are working in the industries. Detailed schedules for the departmental organization in the school, including programs of teachers, classes of boys, classes of girls, and building needs, led to the determination of the size and equipment necessary for the proposed new building.

Winchester, Mass.—The expression of public opinion regarding alleged defects in the work of the public schools in the town of Winchester, Mass., reached such a point that at a town meeting on March 3, 1919, a committee of 15 was authorized,

to consider the advisability of having an educational survey of the public-school system of the town with a view to improving the same, or of taking any other action with respect to the public schools.

The report of the committee of fifteen on public schools, of the town of Winchester, Mass. (1919, 37 pp.), made to the board of selectmen, shows how a detailed questionnaire analysis of an indefinite public dissatisfaction of schools can lead to a survey. Just one year later, a school committee was authorized to make arrangements with the United States Commissioner of Education for a survey to be made under his direction. The report of the survey presents the findings and recommendations of the special committee of nine members under the direction of Dr. F. F. Bunker, including with other members of the bureau, Dr. T. W. Balliet and E. A. Lincoln.²¹ The report is interesting because of the opportunity which it incidently affords in showing the characteristic progress which public education in the United States has made during 30 years, and is also well saturated with clear expositions of the basic theories and of schoolroom practice of present-day education from the kindergarten up. It is also interesting to note that the rather restless state of public opinion regarding school results was not wholly justifiable.

The report is organized about the following topics: The organization, administration, and financing of the public schools; a school building program; work in the kindergarten and the primary grades; the courses of study (both elementary and high school); the high schools; results of the standard educational measurement tests. The

²¹ Survey of the Schools of Winchester, Mass. U. S. Bu. of Educ., Bul., 1920, no. 43. 190 pp.

tests in the elementary school included arithmetic, spelling, silent reading, and reasoning in arithmetic; in the high school, algebra, Latin, French, Spanish, United States history, physics, English composition, and typewriting. "The principle of multiple use of facilities" is well urged in the presentation of the three alternate plans proposed for the building situation in this city. It is also interesting to note the general reliance in the expository sections on the report of the Memphis survey which suggests that future reports of survey investigations may well cease to be strictly local and individualistic.

Lawrence, Kans.—An interesting illustration of a patient observance of survey technique is found in the report of a survey of certain features of the school system of Lawrence, Kans., conducted under the direction of the bureau of school service (F. P. O'Brien, director), school of education, University of Kansas.²² On October 11, 1920, the board of education sought advice as to "what sort of a new high school must be constructed to serve the needs of the city of Lawrence," and on January 3, 1921, the answer, through the survey report, was given. The publication was interestingly delayed so as to record the outcome of the follow-up publicity campaign from January to April, the successful bond election authorizing an issue of \$495,000, and the final actual construction of the building. The procedure of the study followed these three definite steps:

To determine the kind of high-school curriculum or curriculums that are needed in order to provide adequately for secondary education in a social community such as Lawrence, recognizing that the specifically educational factors must receive first consideration. To determine what kind of a school-building program such a curriculum or curriculums will demand. To determine what is the ability of Lawrence to pay for such a school-building program and the most approved method of doing it.

The topics of the report progressed as follows:

The city of Lawrence and its high school; the present high school and its lack of adequate provisions; some facts of social significance relative to the high-school population; school provisions to fit the pupils' needs; courses of study for junior and senior high school; the factors that must be considered; what should be the size of the ultimate elementary-school plant 20 years hence; the ultimate junior and senior high-school plant; school finances; the size of the education problem financially in Lawrence; financing the proposed program.

Wheeling, W. Va.—The strictly professional character of present-day public education is notably attested once more by the recounting of the uneven attainments and difficulties encountered by uninstructed laymen whose zeal and devotion can in no wise compensate for the inevitable errors of judgment, in the educational survey of Wheeling, W. Va., made under the direction of the United States Commissioner of Education.²³ A survey was authorized December 30, 1920, and

²² Bul. of Univ. of Kansas, vol. 23, no. 1, Jan. 1, 1922. 100 pp.

²³ U. S. Bu. of Educ., Bul., 1921, no. 28. 33 pp.

the field work was conducted between January 17 and March 10, 1921, by Dr. W. T. Bawden, director of the survey, with whom were associated five specialists from the Bureau of Education and six from outside. The published report, which contains a brief digest or summary of the principal conclusions and recommendations, shows the very wide spread of the detailed features of a well-organized system of city schools. The scope of the recommendations, which involve an almost complete reorganization of the system, can well be understood in view of the fact that the Wheeling school organization, originally created in 1849, had been allowed to continue to function under the spirit of its original local independence. The initial steps were promptly taken to adapt the survey recommendations relative to the reorganization of the board by reducing the board of education from 25 to 5 by making the superintendent its real executive officer, and by raising the qualifications of teachers.

Niagara Falls, N. Y.—This survey report is interesting because it early instances the pressing problem of providing adequate housing facilities for school children in the postwar period. A study of this problem by the building and grounds committee of the board of education of Niagara Falls in April, 1919, led the board to request the State department of education not only to assist in this particular difficulty but to study the school system as a whole. The major portion of the work covered by the survey was done during the school year of 1919-1920, the measurement of instruction by the giving of standard tests being completed in the autumn of 1920.²⁴ The Niagara Falls survey was conducted under the direction of G. M. Wiley. The usual form of procedure was carried out in the study of the school activities and problems in this city. The program was varied by the addition of a section on industrial education. It is to be noted that the school-building program became guaranteed by a total bond issue of \$3,500,000.

Wilmington, Del.—The school survey of this city is traceable to a special arousalment of public interest in school problems stimulated and related to, the legislation following the Delaware State survey in 1919 (see above). The popular interest in the situation leading to the undertaking is no less indicated by the action of the board of education in March, 1920, which authorized a survey to be made by a committee of 30 citizens, 10 being appointed by the board, 10 by the city council, and 10 by the mayor of the city. The survey was made by the United States Commissioner of Education, with Dr. F. F. Bunker in charge, with whom were associated 8 other members of the staff of the Bureau of Education and 7 others from outside the

²⁴The Niagara Falls School System: Report of a Survey by the State Department of Education. (University of the State of New York. Albany, 1921. 220 pp.)

bureau. The field work was effected in October-November, and the report completed in the following month.²⁵ The form of the report is of interest, the separation being based on those "matters having to do with legislation," including the educational background, school organization, supervision and finance, and a school-building program, which were thus made available in Part I for the convening of the general assembly at its session early in January. "The more strictly educational aspects" of the city's school problem, including the treatment of the elementary school courses, secondary education, and special departments and subjects, comprise Part II.

It was recommended that the city bring itself into coordinated relation with the State system, still in process of reorganization; that the building program be modified to introduce educational enrichments; and that, on the basis of the observation and analysis of school practices and records, the educational achievements be brought forward to a level comparable with the more progressive city systems. In the course of the preliminary considerations the Commissioner of Education thus outlined the scope of a city school survey as covering eight groups of items:

A study of the schoolhouse situation, with recommendations for repairing the old buildings and making them more useful and more sanitary, replacing those out of use, and outlining a building program for the next 8 or 10 years.

A study of the organization of the board of education and its methods of work, with special relation to the business activities and to the schools through the superintendent and other officers.

A study of the organization of the schools and their administration under the direction of the superintendent, with recommendations for improvements.

The financing of the schools, the salaries of teachers and other school officers.

A study of the education, professional preparation, and experience of teachers, and the spirit of the teaching body.

A study of the courses of study and their adaptation to the needs of the city, with recommendations for their modification and improvement, and a statement of reasons for the same.

A study of methods of instruction, the results and standards, with recommendations.

As a background for all recommendations for improvements and readjustments it will be necessary to make a comprehensive study of the city as a community, its industries, the occupations of its people, and its life and ideals.

Baltimore, Md.—This city is outstanding by reason of the fact that it has experienced at least four different survey undertakings. Because of the interest of the educational committee, Mrs. Daniel Miller, chairman, of the Arundel Good Government Club, in 1897 and in 1898, a special report of the sanitary condition of the primary schools of Baltimore was made by Prof. S. H. Woodbridge, of the Institute of Technology of Boston, submitted May 9, 1898. The 14 items listed on the

²⁵ Survey of the Schools of Wilmington, Del. U. S. Bu. Educ., 1921, No. 2, Part I, 132 pp.; Part II, 191 pp.

question blank used for this inquiry bear interesting historical relationship to such a modern instrument as the Strayer-Engelhardt score card for city school buildings. The following year, the second report of the committee on these same schools endeavored to show the progress made in repairing the schools and improving their sanitary condition.

Baltimore was the first large city school system to receive the attention of a definitely organized survey group. It was under the chairmanship of Dr. E. E. Brown, then United States Commissioner of Education.²⁶

The failure of these two studies to arouse an interest in the problem of improving the the public school plant is evident from the appearance, on February 28, 1920, of the report of the physical conditions of the elementary public schools of Baltimore City.²⁷ This undertaking on the part of the teachers enjoyed the cooperation of the board of school commissioners and of the school superintendent and representatives of 22 civic and commercial agencies. The data were collected by means of the Strayer-Engelhardt score card, and are believed to present a fair picture of conditions as they existed in June, 1919. The prophetic character of this report may be seen in the dissociated event of a later undertaking:

The purpose of the report is not to attack any board or individual. The teachers' council is attempting merely to present to the people of Baltimore a fair picture of physical conditions as they exist in the public schools, and their purpose in this presentation is to create in the people of Baltimore a willingness to spend upon the school buildings the money that may be necessary for their rehabilitation.

The Baltimore school survey, 1920-21, is the fourth, the largest, and the most effective enterprise of this type undertaken in this community. It is also one of the two or three most distinctive contributions to the survey movement during the period under review. The inauguration of this survey is a tribute to the reconstructive values of the survey movement, and, at the same time, was incidental to the reorganization of the board of school commissioners following changes in the political complexion of the city government in 1919. In accepting the completed manuscript of the report of May 31, 1921, Dr. Henry S. West makes record of the assurance that the school board, in inviting him to the superintendency the preceding year,

would take steps to have a school survey inaugurated at the very beginning of the new school year, so as to get the completed survey report as early as possible in 1921. My attitude was to welcome heartily a thorough survey of the Baltimore school system as a first and a most important move on the part of the reorganized board of school commissioners. My own experience with previous school surveys had taught me that a school survey properly conducted by a competent and impartial director,

²⁶ See Report of the Commission Appointed to Study the System of Education in the Public Schools of Baltimore, U. S. Bu. of Educ., Bul., 1911, No. 4.

²⁷ Council of the Allied Association of Public School Teachers of Baltimore. Bulletin No. 7. Issued under the editorial direction of Dr. W. H. Malthe. 278 pp.

not connected with the school system being surveyed, could bring to that system a clearness of vision as to the existing situation, and a soundness of judgment as to recommendations for the future, that would be of tremendous and lasting value to the city under survey.

The survey was under the direction of Dr. G. D. Strayer, who utilized the large staff of 110 outside persons. The work began October 1, 1920, and was completed with full reports May 31, 1921. The report includes three volumes devoted respectively to the school plant and the school building program, the administration of public schools and other studies, and the school curriculum. The program of publicity first centered about a series of six luncheons held between December 10 and May 13, which offered an opportunity to present, from time to time, various aspects of the investigation and to enlist the enlightened spirit of citizens in carrying forward the survey recommendations. The second publicity item was the condensation of the elaborate and detailed report into an abstract (54 pp.), in which was presented the facts in summary tables and statements of the findings of the survey, together with a statement of the progress in the adoption of different recommendations that had been made during the conduct of the survey and since its completion.

The distinctive features of this survey include the provision of a reviewing committee of six members, each of whom is distinguished for his knowledge of special phases of public education and the close cooperation between the board of school commissioners and the director of the survey during the progress of the investigation whereby effective adoption of a large number of recommendations was made even before the close of the work. The reviewing committee was brought to Baltimore and spent one week in their effort to evaluate the local situation and the recommendations of the survey.

Caldwell, N. J.—The administrative convenience of a survey to those in authority, even if it includes "only a limited number of fields," in a school situation is well illustrated by A Study Made of the Caldwell, N. J., School System, by Dr. N. L. Englehardt (June, 1921, 34 pp.). It is pointed out that the many prominent elements in this school situation can be progressively balanced by "the adoption of a definite school program indicative of progress, the acceptance of this program by the community, and the harmonious spirit of the community in its development."

Elizabeth City, N. C.—The Commissioner of Education and a committee of seven persons, under the direction of Dr. W. T. Bawden, at the request of the board of school trustees, submitted between July 30, 1920, and July 7, 1921, successive sections of their report, Educational Survey of Elizabeth City, N. C.; Summary of Conclusions and Recommendations, upon school conditions in this city.²⁸ Among

²⁸ U. S. Bu. of Educ. Bul., 1921, No. 26. 43 pp.

the suggestions for improvements are a showing of the greater economy of the work-study-play plan of educational activities for a building program; 17 types of data as most desirable to be found and brought up to date in a city superintendent's office; and the list of 10 characteristics to be found in a school system whose chief executive is "making a continuous survey."

Honesdale, Pa.—On July 13, 1921, Dr. D. W. La Rue submitted the report of the Educational Survey of Honesdale, Pa., (160 pp.), made during the previous school year, in the testing part of which he had been assisted by C. J. Naegle. The study was requested by the school board, the parent-teachers' association, and the chamber of commerce in order "to find whether this borough is doing all that it can and ought to do for its children." This study of a school situation is specially interesting because of the specific objective thus described and kept in mind:

Agreeably, both to the wishes of the local authorities and the desires of the surveyors, the child has been kept in the foreground * * *. Accordingly we have endeavored to follow the child from his home—from his birth, in fact, to and through school and out into society, making a survey of all that happens to him on the way.

The persistence of this objective is to be noted in the topical distribution of the report:

Honesdale, the place and the people; social and educational aims, "for the children's sake"; the preschool care of the children, transition from home to school; care of mental and bodily health; morale, character, discipline, and democracy; the program of studies and the children's future; the child's progress through his curriculum; teachers and supervisors; making lessons effective in the lives of the learners; individuation, and the placing of the school product back in society; administering the schools for the children; school and community interests.

The testing program covered grades three to eight and classes in the high school, and included intelligence tests and achievement tests in reading, arithmetic, spelling, handwriting, language, composition, history, and elementary algebra. The report includes a new scheme for rating teachers which was devised for this survey (pp. 86-89). It is arranged "as a possible aid to those who must supervise and rate teachers; but more especially that teachers may profit by applying it to themselves." The chief qualifications of the good teacher are thus grouped: Character, morale, discipline, democracy; health—mental and bodily—attitude, and energy; general intelligence, general power of adaptation and adjustment; technical achievement.

Hackensack, N. J.—Much relief is sensed in coming to the report of a survey which is of a good or progressive, and not of a bad or backward, school situation. The report of the survey of the Hackensack public school system, by Drs. G. D. Strayer and N. L. Engelhardt, aided by six assistants, describes the modern school system,

and indicates that the specific task of the surveyors was so to frame their analyses as to enable them to point out the directions in which the continuing progress in this system may be moving.²⁹ The survey, indeed, partakes more of the nature of an audit which assures the community that their school money is being spent wisely and places their school system among the foremost in the country. In addition to the approval of a school-building program looking forward 20 years, it is impressive to note the curious problem which

lies in the needs of the children who transfer from other school systems to the local school system. Children who spend their educational lives in the Hackensack schools progress more rapidly than these other children.

The outstanding features of the survey include the measurement of the classroom achievements of children (in June) in reading, handwriting, English composition, spelling, arithmetic, algebra and Latin, the outline for judging the quality of instruction (based upon the observation of two full classroom periods), and the new scale for scoring teaching methods and teaching control. This survey in effect is an experimental demonstration of means for maintaining progress. "None of the real problems in modern education have been left untouched by the present school staff."

Philadelphia, Pa.—Because this city was the last great municipality to yield to the survey procedure in educational enterprises, and also because the organization and the conduct of the investigation represent great and significant changes in the wide-sweeping reorganization of the administration of a State department of education, the report of the survey of the Philadelphia public schools, by the Pennsylvania State department of public instruction, takes on new and exceptional interest.³⁰ Community initiative, based on a belief of survey values in educational progress, expressed itself when in December, 1917, F. P. Gruenberg, director of the Bureau of Municipal Research, and B. M. Watson, director of the Public Education and Child-Labor Association, began their appeals to the members of the school board to undertake a survey. The period of nearly two and one-half years following witnessed interesting manifestations of individual and civic interests in the project. The belated discovery that "the condition of the school treasury would not permit the expense" resulted in a large number of individuals and business corporations underwriting the amount of \$32,000 to meet the expenses. The school board then arranged for a joint survey committee, including six of its own members and six citizens of the city, which began functioning April 15, 1920. Later developments led to an invitation

²⁹ Report of the Survey of the Public School System of Hackensack, N. J. The Hackensack Schools, No. 2, November, 1921. 227 pp.

³⁰ Report of the Survey of the Public Schools of Philadelphia, Pa. 4 books. Public Education and Child-Labor Association of Pennsylvania, 1922.

to Dr. T. E. Finegan to make the survey. The basis of his acceptance is an indication of the effective adoption of new administrative principles in the reorganization of the State department of public instruction in Pennsylvania, which was then under way.

The professional staff of the State department had been organized and equipped to do the identical work which was involved in the survey of the schools of Philadelphia, and the law * * * made it his duty to obtain the information that would be revealed through the survey of important or typical districts for the purpose of advising the legislature on plans for such improvements of the school system as he deems expedient.

The survey was accordingly conducted without expense to the city or to the citizens of Philadelphia.

Associated with the director of the survey were Dr. J. W. Withers, in charge of elementary education; Dr. T. H. Briggs, in charge of secondary education; and Dr. H. S. Weet, in charge of school finance, with whom were associated 36 members and 23 nonmembers of the State department staff, a total of 63 persons, no one of whom had been connected with the Philadelphia schools. The work of the investigation extended over the school year 1920-21. The first public expression of the scope and results of the undertaking was made on March 29, 1922, to a large public audience.

It is to be noted that in a study of the school plant, organization and administration, pupils, types of schools, vocational education, and instruction in its 12 chief branches the survey utilizes the historical background of the city's system as a basis for understanding the conditions that were found to exist. The Philadelphia survey, also ranks with the last Baltimore survey in the timely success indicated in the adoption by the school authorities of recommendations made from time to time during the progress of the work. The readiness of the school authorities to proceed to the correction of the chief defects of the system as soon as they were revealed is expressive of the changed attitude on the part of public opinion toward the investigation as a whole. The report is characterized by specific records of the changes which were effective during the undertaking and before the publication of the document. The reorganization and extension, in the light of accepted modern standards, in almost every detailed feature of a school system, are indicative of the thoroughness of the work. The school-building program is one of the outstanding features, as is indicated by the proposed expenditure of \$84,000,000 by 1940. The spirit in which this general recommendation was accepted is marked by the official action which has provided for the expenditure of over \$39,000,000 on the school plant by 1924.

In view of the gigantic project of modernizing such a large system in the light of this study, the city is exceptionally fortunate in the legal relationships which obtain between itself and the State depart-

ment of education, whereby assistance will be readily available in the formulation and reformulation of plans and policies for a continuous readjustment of the school system.

Sparta, Wis.—Some Recommendations for the Improvement of the School System of Sparta, Wis., by W. S. Deffenbaugh, of the United States Bureau of Education (23 pp.), were made in November, 1921, on the basis of a general view of the situation, and in the effort to secure an expansion of the school system in the light of general educational theory and practice. The study did not include the methods of administration employed by the board of education for classroom instruction and the measurement of the ability and achievements of the pupils. "The report has been written for the citizens of Sparta."

New Bedford, Mass.—Principles, Policies, and Plans for the Improvement of the New Bedford Public Schools presents the results of cooperative studies carried out by the school committee, the administrative and supervisory staff, principals and teachers under the direction of F. E. Spaulding (181 pp., February, 1922). This survey proposed and executed a new plan of organization which undertook a marked departure from the usual procedure. Under the highly detailed "agreement," which listed for study 14 aspects of the school system, the cooperative enterprise extended from September 27, 1921, to February 9, 1922, requiring 10 visits of the director, who—

as provided in the "agreement," has been strictly responsible for the plan, the methods, the reliability of the results, and the formulation of the program of practicable improvements growing out of the studies.

While these studies are referred to in the "memorandum of agreement" as a "survey," they have differed radically in conduct, consistent aim, and immediate results from the school survey that has come to be typical. These differences, deliberately planned from the beginning and kept constantly in mind throughout, * * * should be appreciated by the reader accustomed to exhaustive, conventional survey reports, if he would avoid mistakes of judging these studies, as here published, merely by comparing them with such typical survey reports.

The influences of the studies have been distinctly educational * * * concerning the effective conduct of a school system under the complex and difficult conditions that a city like New Bedford presents. Out of this education of the school forces has grown the intelligent and hearty acceptance of the program of improvements.

The principal items in the program of improvements include: New rules and regulations; changes in the membership and terms of office of the school committee; the reorganization of the administrative and supervisory control of the entire system; the reorganization and consolidation of elementary school principalships; proposed salary schedules; extension of the curriculum of the high school; introduction of the junior high-school organization; changes needed in plans and policies below the high school; and a comprehensive program for the extension and improvement of the school plant.

Shreveport and Caddo Parish, La.—One of the most illuminating surveys of the biennium is that which was made by the Commissioner of Education upon the joint invitation of the board of education of Caddo Parish and the State superintendent of public instruction of Louisiana. The staff included W. S. Deffenbaugh, with whom were associated C. A. Ives, T. Alexander, and F. B. Dresslar, who completed the field work between April 10 and 29, 1922. The report of the findings and recommendations was issued by the Louisiana State department of education.³¹ Opportunity is here given for a study of unusual developments, within the brief period of 22 years, of public education, and also of an unusual combination of the factors involved in the development of a system including city and rural situations, and of the white and the colored races. To the usual items of organization, administration, including finance and teaching staff, buildings and grounds, high schools and elementary schools, is added the measurement of achievements of the pupils. Tests were given in reading, spelling, language, and arithmetic in elementary schools; and algebra, Latin, and reading in high schools. From certain points of view, it is remarkable to find the white city schools up to or above standard, the white rural schools practically up to standard, and the colored schools characteristically below standard.

Atlanta, Ga.—The elaborate inquiry into the school situation in Atlanta, Ga., in 1921-22, is a clear indication of the excellence of the work to be expected from the new formally organized agency, the division of field studies of the Institute of Educational Research of Teachers College, under the direction of Dr. G. D. Strayer, which has entered the field of surveying. It likewise instances the practical wisdom of a community, which, having appropriated \$4,000,000 for school buildings,

felt that a thorough study should be made of the existing conditions in the school plant and that the appropriation should be expended only for buildings erected to become parts of a permanent school plant.³²

The report ranks in scope and technique with the largest undertakings in the biennium. Fifty-three field workers were engaged in the study. The suggestion for a revision of the city charter involving the school board, and the complete reorganization of a 7-4 into a K 6-3-3 system, a recommendation approved by the school board and to be made the basis of the proposed building program, are, probably, the most marked features of this investigation of a long outgrown,

³¹ Survey of the Schools of Caddo Parish, with Special Reference to the City of Shreveport, La. 156 pp.

³² Vol. I, Surveys of the Public School Buildings and the School Building Program for Atlanta, Ga., Directed by Dr. N. L. Englehardt, 200 pp.; Vol. II, The Organization and Administration of the School System, Including School Costs, the Teaching Corps, and the Educational Program of the Schools, Directed by Drs. N. L. Englehardt and E. S. Evenden. 255 pp.

urban, and biracial system of public education. The topics presented in the report are:

School buildings for white children; school-building sites; buildings and building structure; the service systems of the present school plant; classrooms; special rooms; school buildings for colored children; studies of population; the residential distribution of school children; a new educational organization and the white school population to be served; recommendations for the schools for white children; recommendations for the schools for colored children; the cost of the replacement program and the immediate building program; the organization and administration of the Atlanta public schools; school financing and school costs in Atlanta; classification and progress studies; grade progress studies for schools for colored children; the training and experience of teachers; the teaching staff of the schools for colored children; the organization of the educational program; the curriculum; and vocational education.

Cleveland Heights, Ohio.—Upon the suggestion of the educational committee of the Men's Civic Club, the board of education of Cleveland Heights ordered a survey of their schools, which was made between May 15 and 26, 1922, under the direction of Dr. J. W. Withers, with a staff of seven members. It was specified that "the survey should be thorough, covering every important matter affecting the efficiency of the school system," covering six major features, and including over 50 specific points listed for the undertaking. "The one and only purpose should be so to present and interpret the findings, and to make such recommendations for improvement based upon these findings, as will make for the improvement of the schools."

SPECIAL PHASES IN CITY SURVEYS.

The adaptability of the survey procedure to aid educational administration in dealing with problems involved in special situations was made evident in earlier years, and has shown a wider range in the present period. The one-time ambition of a "complete" or a "scientific" survey of a school situation has been wisely replaced, in part, by a disposition to seek guidance through the offerings of selected studies. The following instances are indicative of the new trend in administration to be more specific in its efforts and to project "a program."

The school building program.—That the adequate housing of the increasing public-school population had become a real problem, even in times of peace, was illustrated, e. g., by the St. Paul and the Omaha surveys before our Nation entered the World War. The interruption to the usual pace in constructing additional housing facilities following this event created a nation-wide congestion in schools. This is clearly shown by the ranking importance of the school-building program topic in the recent city surveys, and by these special studies:

Financial and Building Needs of the Schools of Lexington, Ky., made under the direction of the United States Commissioner of Education. Bulletin, 1919, No. 68. 50 pp.

A Survey of Public-School Building Requirements in Cleveland Heights, Ohio, by P. C. Packer, H. W. Anderson, and L. J. Bruckner. 39 pp.

A School Building Program for Meriden, Conn., by A. B. Fernandez. U. S. Bureau of Education, Bulletin, 1920, No. 22. 26 pp.

A School Building Program for Gloucester, Mass., by the United States Bureau of Education. Bulletin, 1920, No. 23, 16 pp. See also School Report of Gloucester, Mass., 1920, pp. 32-50, for the report of the survey of school buildings made by the State board of education through C. D. Kingsley and B. F. Jones.

A School Building Program for Athens, Ga., by A. B. Fernandez, of the Bureau of Education (Bulletin, 1921, No. 25, 97 pp.), plans for the school needs of an old community which has been changing from an educational center to an industrial city; and, in advancing the work-study-play plan, presents an extensive analysis of both the old and the new plan, showing the special values, economies, and the educational enrichments of the latter. The school needs of both the white and the colored population are noted in detail. The comparison of Athens with 44 other cities results in a clear indication of the city's adequate financial resources to carry out the permanent building program proposed.

A School Building Survey and Schoolhousing Program for Napa, Calif., Produced by Graduate Students in Educational Administration. Education, 249. Directed by F. W. Hart. 64 pp.

A School Building Survey and Schoolhousing Program for San Rafael, Calif., by the Department of Education, University of California. Directed by F. W. Hart and L. H. Peterson, Assisted by a Group of 22 Graduate Students in Educational Administration, Education, 249. 70 pp.

The arrangement involved in this study in the spring of 1922, leading to the report of A School Building Program for the City of Winona, Minn. (University of Minnesota, December, 1922, 66 pp.), conducted by M. G. Neale and S. B. Severson, and five assistants, shows an interesting forward step taken by a State university in cooperation with a particular community whereby it makes available to such local communities the most expert service which the university can provide, a service which none of these school systems could provide directly for itself. Upon the request to the college of education to make the survey, the board of regents of the university agreed to release members of its staff from active service for such of their time as would be required to make the survey and carry through the project on the condition, proposed by the Winona Board of Education, of paying "for the time of Professor Neale and such other persons as would be required to carry the survey through and to meet all expenses incident to the making of the survey." The present usual technique is applied in detailing the proposed building program for this city up to 1940, and in revealing the financial ability to carry it forward. Under similar arrangements, the college of education of this institution is conducting other surveys in this State.

A Study of the Public Schools of Harrisburg, Pa., and Recommendations for a Building Program, by F. E. Spaulding, as made to a Joint Conference of Civic Organizations, June, 1922. 30 pp.

In helping communities to solve their respective building and financial problems relating to the school plant, these surveys uniformly indicate how contributions toward extending the instructional opportunities for children may be made. Two types of reorganization are utilized for this purpose: Grade reorganization, so as to provide for the intermediate or junior high school; and, reorganization of the traditional grade type into the work-study-play plan. In several instances of the latter type the recommendations show an actual

economy of about 40 per cent in capital outlay in providing the new facilities of modern standards:

Other instances illustrative of how community and professional interests in educational problems and changes may express themselves are found in the following:

Arithmetic Survey (Monograph No. 3, 1919, 30 pp.), and Spelling Survey (Monograph No. 7, 1920, Newark, N. J., 32 pp.), under the direction of Asst. Supt. E. M. Sexton, are additional evidences of what a department of reference and research in a public-school system may contribute toward a progressive program in instruction.

A Survey of Pupils in the Schools of Bakersfield, Calif., reported by J. H. Williams (Whittier State School, Calif., Bulletin No. 9, June, 1920, 43 pp.), was undertaken "to secure data particularly relating to the distribution and location of pupils in need of special instruction, and to introduce the test method of classification and promotion." Teacher judgments are checked against standard tests. New tests in geography and in temperament were introduced.

A record of progress in the theory and practice of educational administration, by a comparison and evaluation of reports of 19 city surveys, is shown by W. S. Deffenbaugh in *The School Board in City School Survey Reports*, Amer. Sch. Bd. Jour., 61: 23-26, August, 1920; and, also, Bu. of Educ., City Sch. Leaflet, No. 8, 15 pp, September, 1922.

Comparative Results in Intermediate and Elementary Schools at Los Angeles, by T. H. Briggs, Jour. of Educ. Res., 2: 681-692, November, 1920, throws new light upon the results obtained by some efforts at educational reorganization.

How surveying procedure facilitates the segregation of special problems and efforts toward the solution of them is further illustrated by these studies:

A Survey of Commercial Education in the Public High Schools of the United States, by L. S. Lyon, Supp. Educ. Mon., Whole No. 12, University of Chicago, September, 1919, 59 pp., based upon the questionnaire plan of securing data.

The Problem of Adult Education in Passaic, N. J., by A. B. Fernandez, of the Bureau of Education, Bulletin, 1920, No. 4, 26 pp., has its solution suggested along the lines of the specific treatment recommended.

The Survey of the Writing Vocabularies of Public-School Children in Connecticut, by W. F. Tidyman, Bureau of Education, Teacher's Leaflet, No. 15, November, 1921, 18 pp., presents the spelling situation as of 1917-18 in this State, and, as a result of a new device in sorting the numerous words appearing in compositions, adds a list of 3,000 commonest words, arrayed in grade distribution, third to ninth grades, inclusive.

Various modes of ascertaining and judging the variations in the intelligence in school groups, casually appearing in some of the more general surveys, characterize some special studies:

An Intelligence Survey of a Typical Town School (Wapello, Iowa), by R. H. Sylvester. Ped. Sem., 26: 365-71, December, 1919.

A Survey of the Three First Grades of the Horace Mann School by Means of Psychological Tests and Teachers' Estimates, and a Statistical Evaluation of the Measures Employed, by C. F. and L. M. Chassell. Jour. of Educ. Psych., 12: 72-81, 243-252, February-May, 1921.

Mental Survey of Utah Schools and Adaptation of the Army Beta Tests, by G. S. Snoddy and G. E. Hyde. University of Utah Bulletin, vol. 12, no. 6, September, 1921. 28 pp.

The Intelligence of High-School Seniors as Revealed by a State-Wide Mental Survey of Indiana High Schools, by W. F. Book, New York, Macmillan Co., 1922. 355 pp. Made with the authority and assistance of the Indiana State Board of Education.

The Educational Survey of the Phillippi School System (April, 1922 [?] 39 pp.), by the department of education of West Virginia University, under the direction of Prof. L. V. Cavins, is chiefly a study of pupil abilities by age—grade distribution and intelligence tests and of instruction by 11 educational tests, with a resultant reclassification of pupils.

City school reports continue to show, from a publicity point of view, the excellent formative effects appearing in the type of educational literature produced by the surveys. Two reports may be cited:

Survey of the Scranton (Pa.) Public Schools, 1918-1920. 240 pp., which has more material than that usually found in a biennial report.

Seventy-Ninth Annual Report of the Superintendent of Schools, Detroit, Mich., 1921-22, 110 pp., which graphically presents a statement of growth, policy, progress, organization, buildings, finance, and statistical studies.

THE TRAINING OF TEACHERS FOR PUBLIC EDUCATION.

When the school-survey movement made its modest beginnings 12 years ago in several remote and inconspicuous systems, it found American schools long in possession of a basic philosophy which ascribed the central position in a school system to the teacher. From the first the surveys have, with increasing emphasis, been directing critical and sympathetic attention to the work of the teachers and the administrative practices which modified the conditions of possible success on their part in securing acceptable instruction. The period under review has brought forward three survey reports in this special phase of education.

Missouri.—The outcome of a chance request to the Carnegie Foundation for the Advancement of Teaching in July, 1914, by Governor Major, of Missouri, led to the publication by the surveying agent in January, 1920, of the monumental report on the professional preparation of public-school teachers, by Dr. W. S. Learned, assisted by Drs. W. C. Bagley, C. A. McMurry, G. D. Strayer, W. F. Dearborn, I. L. Kandel, and H. W. Josselyn.³³ Although limited to the problem of the preparation of Missouri teachers in normal schools, the great length of time devoted to the study enabled it to exhibit the most extensive embodiment of theory and practice in the proposals finally offered. Every known analytic device was appropriately employed in treating the related facts. The chief topics are: Government and control of Missouri normal schools; purpose of a normal school; the personnel; curricula; operation and product of the normal

³³ The Professional Preparation of Teachers for American Public Schools: A Study Based upon an Examination of Tax-Supported Normal Schools in the State of Missouri. Bulletin No. 14, New York 475 pp.

schools; and summary of proposals for the preparation of Missouri teachers in normal schools. One of the chief purposes of the report is to emphasize the need for that professional conception of ability, of knowledge, and of preparation which must characterize the teachers' equipment before the schools can become the effective agency in civilization which they aim to be.

Minnesota.—Teacher Training Departments in Minnesota High Schools, by Dr. L. D. Coffman,³⁴ presents a cross section of the situation existing, in 1915-1917, in this form of the Minnesota practice of training teachers for the country schools, a practice which had been in operation for a number of years. Consideration is given to the organization and effectiveness of these training departments, including the teachers, the students, the curriculum, instruction, administration, and finances. Although this form of training teachers appears to run counter to the policy of generalized control in American education, during the interval of the time between the study and its publication, gradual improvements had been made in the work of these departments.

Ohio.—Cooperative enterprise in the training of public-school teachers in Cleveland had made such progress in recent years as to present a group of intricate problems, a suggested solution of which was secured by a special study which contains the report and recommendations of an educational commission consisting of Drs. W. C. Bagley, J. W. Withers, and G. G. Chambers.³⁵ This commission was appointed and financed by the Cleveland Foundation at the request of the joint conference committee of the Cleveland School of Education and Western Reserve University. The work of the commission, in reviewing the more recent activities in extension courses and summer sessions conducted by the Cleveland School of Education and Western Reserve University prior to September, 1920, and other features in the situation, resulted in a recommendation of the organization of a senior teachers' college by the affiliation of the school of education and Western Reserve University. This would provide more thorough professionalization of the teaching staff, secure the advantageous connection of teachers with specialists in scholarship under university organization, and otherwise bring "into an effective cooperation with the public schools a large number of organizations that are making for civic and community betterment."

HIGHER EDUCATIONAL INSTITUTIONS.

During the period the issues in higher education have not been so markedly defined and tentatively disposed of by the special survey process. Surveys of colleges and universities may be expected to

³⁴ General Education Board. New York, 1920. 92 pp.

³⁵ The Professional Education of Teachers in Cleveland. Western Reserve University, Bulletin, March, 1922. 92 pp.

appear with less frequency in future by reason of the more stabilized organizations whose routine duties essentially function after the fashion of continuous surveys. The stress and strain which often lead to a survey will tend to appear in exceptional cases. The regional associations of colleges and secondary schools have come more and more to discharge legislative functions in "standardizing" higher institutions in their respective territories. The Carnegie Foundation for the Advancement of Teaching, the General Education Board, and the more national organizations of the several groups of higher institutions are giving constant attention to new problems and institutional situations with corrective proposals. That the higher institution, however, has not outgrown the need of being surveyed nor reached a stage where it can not benefit from survey conclusions is attested by the special studies made during the biennium.

University of Minnesota.—The first report of the university survey commission, authorized by the board of regents, in January, 1920, is a good illustration of how a higher institution proposes to keep setting its own house in order in relation to other State educational activities.³⁶ Seven other illustrative questions were proposed for study by the commission:

What in the nature of extension of grounds, construction of buildings, in the various departments and substations of the institution, if no change is made in the present 4-year period, will be required to meet the growth? Should the situation be relieved by the adoption of the principle of junior colleges to take over the work of the freshman and sophomore classes in the university? Should agricultural schools, such as the schools at Crookston and Morris, be multiplied? Should certain technical work, now done in the department of engineering and in the school of chemistry, be also taught in the junior colleges and agricultural schools? Are our professional courses too long? May not requirements for higher mathematics and other cultural things be somewhat lessened in preparation for medical degrees? What internal administrative adjustments could be made to improve and increase the amount of instruction?

Arkansas.—The wide relationships centering in higher education are again illustrated in the reports of two special studies conducted in this Commonwealth. The Report on the Higher Educational Institutions of Arkansas, by G. F. Zook, of the Bureau of Education,³⁷ contains the results of his inspection of the 13 higher institutions in the State, made at the request of the State superintendent of public instruction, in view of certain high-school regulations recently adopted by the State board of education. By September, 1923, this board "will need to know what colleges of the State may be considered as standard colleges, in order to ascertain what persons are eligible to teach in the high schools of the State."

³⁶ Report of the Survey Commission: I. The Growth of the University in the next Quarter Century. Bulletin of the University of Minnesota, June 21, 1920. 50 pp.

³⁷ U. S. Bureau of Education, Bulletin, 1922. No. 7. 18 pp.

The Educational Survey of the University of Arkansas, a digest of the report of a survey, made at the request of the joint legislative committee in charge of the survey, under the direction of the United States Commissioner of Education, was made by a commission in charge of G. F. Zook, with which was associated a group of three "advisors," the newer surveying means of strengthening the recommendations made.^{37a} Attention is given to the historical development of, and obstacles to, higher education in the State, and to the details of each school and its functions, and the resources of the institution.

Maryland.—The complications of historical origin involved in its policy of higher education in an older State appear in a presentation of the facts accumulated in a study which should concern itself "with the relation of Maryland to the six colleges and universities (white) to which the State has made appropriations for 1920 and 1921," and which "would contain no suggestions or recommendations as to policy." The work was a continuation of a study interrupted by war conditions and renewed, upon invitation of Governor Ritchie, by the General Education Board.³⁸

Colorado College.—At the suggestion of President C. A. Duniway, Dr. R. L. Kelly, with the Commission on the Distribution of Colleges as an advisory committee, of the Association of American Colleges, undertook, with the staff of the Council of Church Boards of Education, the investigation published under the title, *Colorado College: A Study in Higher Education* (May, 1922). With the State as a background, the material is arranged under these headings: Present educational geography; environmental background of education; foundation of higher education; higher educational structure; Colorado College; denominational and independent education; summary.

It is believed the study contributes something to the functional evaluation of the institutions concerned. It certainly demonstrates that it is quite impossible for any single type of institution to meet the needs for higher education of the ambitious young men and women of this State or section of the country.

The studies of the Association of American Colleges, on the organization of the college curriculum, and certain measured features of college curricula in 38 institutions, appearing in its bulletins for March and December, 1921, are useful in revealing tendencies apparent in collegiate instruction only from a comparative overview.

University of Arizona.—The Report of a Survey of the University of Arizona, made in February-March, 1922, under the direction of the United States Commissioner of Education (Bul., 1922, No. 36, 89 pp.); had the advantage of noting the progress made by this institution since the first survey (unpublished) conducted by the bureau in 1917.

^{37a} Educational Survey of the University of Arkansas: Summary of Conclusions and Recommendations. U. S. Bureau of Education, Aug. 31, 1921. 43 pp.

³⁸ State-Aided Colleges in Maryland: Report to the Governor of Maryland, Oct. 4, 1921. 59 pp.

The committee, including Drs. G. F. Zook, P. R. Kolbe, and Mr. L. E. Blauch, made "a survey of the general educational and financial efficiency of the university, with emphasis on the business and financial condition and administration of the institution," including special attention to the budget for the ensuing year.

In advising the people of the Commonwealth that the institution has now become "a real State university," the report details its findings on these topics: The University of Arizona, the State, and the Federal Government; organization of the university; internal administration; the faculty; students and standards; income, expenditures, and costs.

The limitations of past surveys and a description of new survey objectives appear in an address by Dr. S. P. Capen before the National Association of State Universities, November 13, 1920, on "A national survey of State universities—How should it be undertaken?"

A thoroughly satisfactory survey has never been made, * * * satisfactory from the scientific and educational point of view; one which represents a complete inventory of the university in its varied relationships, and which offers a sane and stimulating program for future development.

FOREIGN SURVEY.

A report on education in Africa,⁴⁰ prepared by T. J. Jones, is a record of what is probably the most unique survey yet undertaken. Sensing the facts that missionary enterprise in Africa had "long felt the need of a thorough survey of conditions there with a view to making their efforts more effective on the educational side," and that postwar conditions could not escape influencing educational policies in Africa; the Phelps-Stokes Fund capitalized its previous experience in the survey of Negro education in the United States, and provided for a commission to make a first-hand study of education in Africa. The survey was further made possible by the cooperation of the European Governments in control of African territory and of European missionary societies concerned with Africa, as well as that of seven American mission boards. The commission was made representative, including men and women, European, African, and American, and conducted its activities through three years, the first to general preparation, a second to the field work (September 4, 1920, to August 2, 1921), and a third to the preparation of the report. The geographic scope of the survey is shown by the topics contained in the report: Africa and education, adaptations of education, organization and supervision, education of the masses and of native leader-

³⁹ Educational Record, January, 1921. pp. 20-28.

⁴⁰ Education in Africa: A study of West, South, and Equatorial Africa by the African Education Commission, under the Auspices of the Phelps-Stokes Fund and Foreign Mission Societies of North America and Europe. New York, Phelps-Stokes Fund [1922]. 317 pp.

ship, cooperation for the education of Africans, Sierra Leone, the Gold Coast, Nigeria, British South Africa, Angola, Belgian Kongo, and Liberia.

It is our hope that this study may become a textbook for missionary candidates and missionaries working in fields other than Africa. The principles set forth may be applied in any other field, and it will be a great day for missionary education when the conception of adaptation in education is understood and put into practice everywhere, for these principles are universal in application.

UNPUBLISHED SURVEYS.

Surveys conducted by the Bureau of Education: Trenton, N. J.; Colorado Springs, Colo.; Raleigh, N. C.; Washington, D. C.; Washington, N. C.; Parkersburg, W. Va.

Surveys conducted by the State department of education, New York: Elmira, N. Y.; Whitehall, N. Y.; Saratoga, N. Y.; Amsterdam, N. Y.; Schenectady, N. Y.

CHAPTER XXIV.

AMERICANIZATION IN THE UNITED STATES.

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DEFINITIONS AND PRELIMINARY CONSIDERATIONS.

A VERY VAGUE WORD.

Probably no word in the English language to-day is quite as meaningless as *Americanization*. The reason is obvious. It has been so loosely used during the past several years to denominate all sorts of diverse activities that it has ceased to have any particular significance whatever. Since 1915, when the *Americanization movement* came into being, the American people have joined dozens of Americanization societies, listened to hundreds of people who declaimed about Americanization, and read thousands of dissertations, wise and otherwise, on the same theme. For several years past, we have been promoting Americanization movements, both genuine and spurious, with equal zeal. It has been a period of much idle talk, much earnest endeavor, and some accomplishment, the last within the past two years especially. This report, as it happens, deals with these past two years only. There is no point accordingly in commenting, except in passing, upon Americanization idiosyncrasies and ineptitudes that antedate this period. It is enough to point out that the critic was not wholly wrong who spoke of the Americanization movement as "bound for nowhere, and going under full sail." That, however, was probably inevitable at the outset. Fortunately it can be written down with certainty and gratification that the period from 1920 to 1922 offers assurance of sane and steady achievement from this time on.

AMERICANIZATION—THE BROAD VIEW.

It is commonly accepted to-day, in theory at least, that Americanization is something that has to do not with immigrants alone. It may be defined as the business of making good American citizens of everyone that inhabits American soil—the native born and the immigrant, the adult and the child in school. No longer do we assume that a man is truly American, in attitude and in action, merely because

he happens to have been born within our country's confines. The conviction has been brought home, rather, that it is in large measure the un-American attitude of the native born that has made the Americanization of the immigrant so difficult. And we are pretty certain now that, if the so-called American portion of our communities would but realize its obligation to live the creed of which it boasts, the immigrant problem would be solved with unconscionable ease. This is platitudinous, but tremendously important.

Note that the above throws the obligation of solving the immigrant problem on the community as a whole, not on any one or two agencies in the community. For years the burden of this work fell mainly on the school, and on private agencies which regarded the teaching of the immigrant as a very important task. It was assumed seemingly that, if we could teach the immigrant the English language and bring him thereby to a knowledge of America the beautiful, his Americanization was assured; and this despite the fact that he actually encountered America the unlovely at every turn. Obviously, this spells futility. The schools have a part to play in the Americanization process to be sure—a part of the utmost importance. ~~Theirs~~ is the task of removing the language barrier. This is often styled the first step in Americanization. To this task the schools should primarily address themselves. And that they are doing to-day with considerable success. But if the immigrant problem is really a community problem, the schools can do comparatively little, working alone, unaided, and oftentimes without the interest and support of the community as a whole. It must be recognized that Americanization is a matter of schooling, in truth. It is also, however, a matter of prevention of exploitation, of good housing, of satisfactory industrial conditions, of neighborliness, and so on. Everything that touches the immigrant's life is an instrumentality for his Americanization, or the reverse. Hence the need for the entire community to take a hand in this work of assimilating the thousands that yearly throng to us from overseas.

AMERICANIZATION—A MORE RESTRICTED INTERPRETATION.

It were, indeed, a hopeless prospect to try to tell of what has been done the country over in this broad field of Americanization, just indicated, during the past two years. Happily, the scope of this report calls for no such investigatory excursion. The task is rather to find out what advances, if any, have been made in the schooling of the immigrant. In so far as we are concerned, accordingly, the following restricted interpretation is defensible:

Americanization is the enterprise of teaching the English language and the principles of good American citizenship to the adult alien,

in classes that may meet anywhere and at any time, but always under the control of public educational authorities.

This is most obviously an arbitrary interpretation. It very decidedly ignores every factor and influence in the Americanization process except that of *teaching*. It further takes no cognizance of any teaching except that done under public authority. Such an arbitrary limitation, however, implies no disparagement of other agencies engaged in this field of social endeavor. It is merely an attempt to focus attention on *one* agency that should be very purposively and intelligently engaged. Most people agree to-day that it is comparatively idle to talk of any effective Americanization of the immigrant until the language barrier has been swept away. This is the task of the school. It is also generally recognized that the schooling of the immigrant is a public function, and should be handled by public educational authorities. Is this the case?

FURTHER DELIMITING.

Are the public schools of America promoting Americanization as above defined? To what extent? Through what means? In searching for answers to these questions, a very important consideration must be borne in mind. For many years back the "evening school" has been a part of our public-school system. In those evening schools ambitious aliens have learned English and other things, after a fashion. This report, however, does not pretend to deal with immigrant education as carried on in evening schools, except in those States and communities that have since 1915, under the impulse of the Americanization movement, attempted, at least, to set up an adequate educational program. The reason for this is twofold:

1. The old-time "evening school" has failed lamentably as an Americanization agency, for reasons that have been cited again and again, since the Americanization movement first brought the immigrant's educational needs to the fore. It is not far from wrong to say that except in the case of the very ambitious student the old-time evening school does as much harm as good, in that it contributes to the general disillusion which the immigrant undergoes during his first years in the Promised Land. There are, unfortunately, all too many of these antiquated schools operating in 1922. In many places, apparently, the idea still holds that the teaching of the adult immigrant is a comparatively unimportant matter anyhow; that anyone can do such teaching; that no supervision is necessary; and that under no circumstance should this work be allowed to assume expensive proportions. A community that thinks in these terms can not be regarded as handling Americanization work as herein defined.

2. Except in those States that have definitely organized for Americanization work, it is impossible as yet to evaluate what Americanization through the schools has achieved. Here and there in an unorganized State, such as Minnesota or Michigan or Nebraska, one notes with admiration the splendid work of cities like Minneapolis, Omaha, and Detroit. These are shining exceptions, however. The truth is that what is being done in the field of Americanization the country over is pretty much shrouded in obscurity, except, as stated, in organized States. Even the bare statistics available are significant only for the fantastic conditions that they seem to reveal. For a few years past, the Federal Bureau of Naturalization has attempted diligently to gather information. Actually, however, no one knows either the quantity or the quality of Americanization work carried on by the public schools the country over. What we do know is that some States that have given this enterprise serious attention are pointing the way to all the others, and are achieving more or less significant results. Reference will be found to some of these States in Chapter II, and in Chapter III the organization and achievements of several well-organized States are analyzed. Let there be no misunderstanding here. It is clearly recognized that, in States other than those specifically noted in this report, striking results have been secured in individual cities and towns especially alive, for one reason or another, to their immigrant problems. And there is positively no intimation that in States unmentioned or only casually mentioned public-school authorities have not promoted the education of the adult alien as best they could. The point is that during the past two years convincing proof has been given that certain policies and procedures in immigrant education, carried out consistently and persistently over a State-wide area, produce tangible results. The obvious need, accordingly, is to examine especially the State programs that embody those policies and procedures. This way progress lies.

A FEW FUNDAMENTAL PRINCIPLES AND POLICIES.

CLASSES ANYWHERE, AT ANY TIME—THE OLD IDEA AND THE NEW.

The old idea was that the immigrant should receive his schooling in the evening schools, and there only. Further, the notion prevailed that the community's obligation was discharged when it opened these schools, announced the opening in a perfunctory fashion, and then, all too often, conducted them most miserably. We were doing something for the immigrant. Let him take it or leave it. That was the thought—and is to-day, unfortunately, in not a few places. It is not surprising that only the most ambitious availed themselves of this schooling and displayed the determination to stick the performance through.

The evening school that followed this policy dealt with scores; and thousands passed untouched, or came and left, disillusioned. Mr. Frank Thompson has reckoned that 2 per cent of the entire adult non-English-speaking population in this country were enrolled in the evening schools in 1910. Hardly an indorsement of these schools!

The new idea, born of the Americanization movement, may be set forth briefly as follows:

1. The education of the immigrant is a task to be carried on at public expense, not primarily for the sake of the immigrant, but as a most necessary step to make American democracy secure.

2. Cognizance must be taken of the fact that the immigrant adult, who usually works by day, is naturally indisposed to give up his evenings to the schooling process. Human nature being what it is, this must be reckoned with. In this connection, too, it must be remembered that the non-English-speaking immigrant who flocks with his own people in large communities, often does not feel the compelling need of education in English and in the principles of American citizenship. Accordingly, every effort should be made to offer educational facilities at a time that best suits his (or her) convenience, and of a character that best suits his needs. This means schooling in evening schools, of course; in addition, it means schooling in factories, in homes, and in other places where the immigrant is

usually found. And in addition, again, it means the expenditure of enough money on these schools to insure skillful supervision and superior teaching. The education of the immigrant is a difficult teaching performance. It must not be committed to the hands of those who work at it merely as an extra job, for the extra compensation involved.

3. Every possible positive means must be employed to inform the immigrant of these opportunities for schooling and to induce him to take advantage of them. It is not enough to organize these classes and hope for attendance. The immigrant's natural indisposition to do extra work must be overcome. He must be "sold" on the idea that this is something he ought not to pass by. Through the printed words, in English and in the foreign tongue, through propaganda meetings, through personal solicitation, through every means but those of a compulsory nature, he must be persuaded to go to school. It is to the interest of the American community that he so do.

1. THE FACTORY CLASS.

To thousands of immigrants the shop or factory is America. It would seem, accordingly, that the organization of classes in factories is a very apt translation into practice of the principle that we are considering. This does not, and should not, mean that it is industry's function to conduct these classes. Nor is industry called upon necessarily to permit them during working hours. Industry performs its part when it makes it possible for its adult aliens to meet in groups on the premises, thereby supplementing the "evening-school" plan; and when, besides, it lends all its persuasive effort to secure and maintain class attendance. Such cooperation is of surpassing importance, and when secured promotes the growth of immigrant education in a very marked degree.

Has industry been thus cooperating during the period 1920-1922? and is the factory class a proved success?

The evidence here is contradictory. Massachusetts answers "Yes." Elsewhere throughout the country the answer is pretty generally "No."

It seems important in this connection to sketch very briefly the development of the factory class in Massachusetts during 1920-1922, in order to indicate what can be accomplished under propitious auspices. As in the case of several other States—New York, Ohio, Michigan, Pennsylvania, and Illinois—factory classes were operating in Massachusetts prior to 1920. In all of the States named, and in scattered cities here and there, these classes were conducted; some by the industries themselves, some by private welfare organizations, notably the Young Men's Christian Association; some by the public

schools. Impetus was given to the movement by the Americanization conference, held in May, 1919, under the direction of the Federal Bureau of Education. It was further promoted at the Nantasket conference, so called, initiated by the Associated Industries of Massachusetts and attended by industrial representatives from all parts of the country (June, 1919). Then in September, 1920, came the very significant Conference on Immigrant Education in Industry held at Plymouth, Mass., under the joint auspices of the Massachusetts State Department of Education and the Associated Industries of Massachusetts. The year previous the late Mr. Frank V. Thompson, superintendent of the Boston schools, and one of the collaborators in the Americanization study promoted by the Carnegie corporation, had made the following statement:

Cooperative classes with the public agency sharing with industry the burden of education are becoming more numerous and promise soon to be the standard procedure. We may hail this tendency with satisfaction, both because the ultimate aim of citizenship will be held better in view and again because it maintains the principle of public responsibility in education. The usual division of the financial burden is to have the corporation furnish heat, light, and room, and the community furnish instruction, supervision, and educational material.

Nearly 200 people were gathered at Plymouth for two days. They represented industries and schools in almost equal proportions. The greatest freedom of discussion prevailed throughout. The one topic treated was "How to reach and teach the adult immigrant in industry." The following statement was submitted to the industrial group, which indorsed it unanimously:

1. Industrial leaders should come to an out-and-out acceptance of the principle that education of the immigrant is something that should be promoted by everyone as a public duty. It is merely a question of good citizenship. In the past doubts have been expressed both about the possibility and the value of teaching English to our non-English-speaking population. We must have none of these. The teaching of English alone will not serve to eliminate what we look upon as un-American tendencies in the foreign born, but it is hard to conceive of this being done while the language barrier remains, and the language barrier can be removed much more quickly if the industries will lend wholehearted aid as to a project in which they believe.

2. The schools and the industries should have a mutual confidence in each other's intention and ability to perform this work better, as experience points out failures. There have been mistakes and failures in the past, for which both the schools and the industries have been responsible. The schools have sometimes failed to accomplish what they might have accomplished, even in a field so new. On the other hand, industries have often been too skeptical of the "theories" of school people. Let us all get together in a spirit of respect one for the other. It is time for a new deal.

3. Industries should recognize that the Americanization of all its foreign-born employees calls for intelligent and responsible leadership. If this work is worth doing, it is worth doing well. This means the placing of responsibility in the hands of a plant director of Americanization or some such official. There is little hope of success, lacking this centralized responsibility.

4. Straightway it must be said, however, that every plant executive, from the president down, should be "sold" on the importance of the work, and should catch the spirit of it. It has often been said that the foreman can make or break any Americanization plan. This is very largely true. It is of little avail for a few officials to strive to educate the immigrants if indifference and hostility pervade the plant as a whole.

5. As a preliminary to its work, the plant should conduct an investigation to determine those facts which would enable school officials and factory officials working together to organize the work intelligently and speedily.

6. Following on this preliminary investigation, recruiting meetings should be held for the purpose of securing class enrollment. Every legitimate means of persuasion and encouragement should be used to interest foreign-born employees in the classes, but the note of compulsion should never come in. Industrial messages in foreign languages may be used very advantageously in this business of recruiting.

7. Industry should provide adequate school accommodations. It pays to give a little attention to this matter and spend a little money.

8. Classes once organized, probably the most important duty of a plant director is to carry on an effective follow up. Attendance will inevitably dwindle; that is to be expected. But attendance will be maintained in a surprising degree if the immigrant feels that the plant director has a constant interest in his school progress. There should also be occasional meetings between the plant director and the members of the teaching staff for the purpose of talking over attendance and related matters.

9. Industries should occasionally provide incentives for the purpose of keeping up interest in the work. Graduation ceremonies and commencement ceremonies find place here. One may note, also, articles in the plant publications, school orchestras, and glee clubs. Anything that tends to socialize instruction is valuable as an incentive.

10. The point is often made concerning the best time for holding classes. Shall they be conducted on factory time, employees' time, or a combination of both? This matter is not of vital importance, provided factory authorities and school authorities cooperate intelligently and earnestly in a real program of immigrant education. There is nothing wrong in the principle of conducting classes on factory time if the true aim of Americanization is always kept in mind. On the other hand, there is little ground for the opinion that it is a hardship for immigrants to give a moderate amount of their own time weekly to instruction offered by skilled teachers. Each industry should decide this question on the basis of the hours of labor and other working conditions. No dictum can be expressed to apply to the different situations in different plants. None need be expressed. Given good teachers, good leaders, and an earnest desire on the part of the industry from the top down to put the thing over, success will be assured, regardless of the time when classes are held.

The above is significant enough. But in addition both schools and industries agreed at this conference on a very definite cooperative plan. (See Appendix A.) Mr. Thompson's expression of faith was translated into a scheme of procedure. The way was cleared for a definite advance.

It is beyond the limits of this study to note the steps in that advance. Sufficiently significant is it to write down the following:

Number of factory classes conducted by public-school authorities in Massachusetts industries: 181 in 1919-20, 327 in 1920-21, 366 in 1921-22.

The experience of Massachusetts is set forth in this specialized field of immigrant education in order to point out the very important fact that the factory-class idea can be developed if the schools and the industries cooperate persistently and whole-heartedly. The inference is obvious that Massachusetts has been fortunate indeed in that industrial concerns have seen their duty and have done it without vacillation. In fact, it is not too much to say that the success of this State is due essentially to the help received from industry. And the question arises, Why is not industry equally cooperative elsewhere? That this is not so is apparent. School authorities in other States—New York, Connecticut, Delaware, California, and Ohio—have tried zealously to inaugurate these classes. But the results are discouraging. Except in Massachusetts, there are fewer of these operating to-day than in the hectic Americanization period during and immediately following the war. Detroit, one of the pioneers in factory-class development, has practically abandoned the idea. Chicago, another pioneer, operates now on a very small scale. New York State, which gave great promise in the early days, is carrying on with difficulty. California cities reports only 15 factory classes in 1921-22. Ohio's most recent report (1922) sets forth a story of marked achievement in general school organization and enrollment, but mentions the factory class only casually. Delaware says:

The first factory class was organized in October, 1921. * * * It met for three days a week for half an hour at noon. * * * It is hoped that with the successful inauguration of this class, Delaware employers will give more consideration than they have in the past to the advantage of providing instruction for immigrants in plant classes.

This last is encouraging. The general conclusion, however, of all this discussion seems clear. The idea of reaching and teaching immigrants in the places of their employment has received a decided setback in the period under discussion (1920-1922). The American employer, seemingly, has decided that Americanization, "a thing born of the war," is something to have done with, now that the war is over. Can he be induced to think otherwise? If not, the elimination of the language barrier will be too long delayed.

2. HOME AND NEIGHBORHOOD CLASSES.

The development of these classes has gone on apace during the period 1920-1922. Reports from different localities, in fact, tell a most ingenious story of the successful efforts that have been made

to bring the school to the immigrant instead of compelling the immigrant to come to school. And a striking feature of this story is the reference made to the growing employment of the full-time teacher whose business is to go from home to home, from one meeting place to another, teaching women or men, as the case may be, at times when they can best learn. This extension of the old evening-school idea has very evidently won an important place in immigrant education. And in assigning credit for its development no one will begrudge very honorable mention to California, which has earnestly promoted the "home-teacher" idea for several years past. It is encouraging to note that this State is able to record increasing progress from year to year. The report for 1921-22 says:

Many communities where home teachers have been employed have had them this year or engaged them for next year. Still other districts have employed full-time teachers of adults who have done considerable work with home classes. Cities where home teachers were employed have increased the number of such teachers. Last year there were 59 home teachers employed in California. This year there are 68. Last year there were 75 full-time teachers doing adult immigrant education work, and this year there are more than 100.

The California report goes on to say:

With increasing socialization there has been much greater leniency in the choice of meeting places. Under the rural high schools there are classes for men and women on the ranches. Some of these mothers' classes have made the first American contact which the foreign women have had. In the citrus belt many of the fruit pickers' camps have a clubroom or other meeting place where trained teachers are organizing clubs and classes for the foreign adults. In the railroad lumber camps and in the camps where construction workers live there are many teachers working for the local school, but conducting their classes in a room or cabin provided by the industry. This makes for such close association between the immigrant and his teacher that the most practical and useful kind of lessons can be provided.

Other States and local communities have not lagged behind in thus extending their opportunities. From Delaware comes a very suggestive account. For several years back the school authorities of this State, with the invaluable cooperation of the Service Citizens' Americanization Bureau, have conducted experiment after experiment, intended to bring the school and the immigrant more closely together. As an example of what may be accomplished, if school authorities are disposed to depart from the beaten path, the following paragraph is submitted without comment:

Another request for instruction came from 10 members of the crew of the U. S. lighthouse tender *Iris*. These men were aliens who had taken out first papers and wished to prepare for naturalization. Their hours of work were such that they were unable to attend the Wilmington night school classes. Arrangements were made with the captain to have a class on the boat. It was

held in the crew's messroom and met on whatever nights the *Iris* was docked at Edgemoor. The walk from train to the boat was long. In heavy storms the roads were almost impassable. For 52 sessions, however, one of our Delaware Americanization teachers with the splendid ideal of service that has ever characterized their work, met this class of seamen and helped them by example as well as by precept to know the noblest and best of our American traditions and institutions.

Home and neighborhood classes have increased in Massachusetts from 92 to 294 in the period 1920-1922. In 1920 the New York State Department of Education spent \$100,000 in putting home and factory teachers directly into local communities. And while this auspicious beginning has been somewhat curtailed because of subsequent smaller appropriations, the effect of this expansion is still very noticeable in the educational activities of the larger cities. From Ohio one hears that "Akron's greatest achievement has been the development of women's classes, particularly in the homes. This year (1922) 56 classes have been established." It would be a long story if one were to tell of everything that has been achieved in this field. Suffice to say that the home and neighborhood class in the plan of immigrant education has seemingly come to stay. This is a distinct advance.

3. OTHER ILLUSTRATIONS OF THE "NEW IDEA."

In Thompson's *The Schooling of the Immigrant*, written several years ago, the plan of a day school for immigrants is sketched, and the recommendation made that this experiment be promoted widely. The period 1920-1922 witnessed many attempts to work this out in various ways. Much of the classwork in homes, clubs, and factories already described is actually carried on by "full-time" teachers (as in California), who thus, in effect, carry out Mr. Thompson's idea. In addition, however, we note a few attempts to establish the day school, patterned after that in Boston, which has operated since 1911. The day school in Springfield, Mass., which deals mainly with the newly arrived immigrants of all ages, is a school of surpassing interest. This same city, incidentally, progressive in immigrant education as in other fields, was one of the first communities to set up the all-year school, running from September to September, with classes for immigrant women featuring among the many activities of the summer playgrounds.

A far cry, this, from the old evening-school season of 40 or 60 nights! Delaware also reports the establishment of the all-year school,¹ and in the same document tells the story of the events that led up to the organization of its full-time day school or service station for immigrants, in October, 1921. This school meets from 8 o'clock in the morning until 5 o'clock in the afternoon, five days a

¹ *Ann. Rep. Dept. of Pub. Instruction (1922).*

week, and has a staff of three teachers, each working six hours daily. Worcester (Mass.) conducted what was termed "a day school for unemployed immigrants" for several months in 1921. During the same year the Boston school already referred to registered 1,500.

There are doubtless other places that have extended their educational opportunities as here indicated during the past two years. Enough has been written, however, to prove that the old idea of dealing with the tired immigrant in evening school and nowhere else has been given over in progressive States and communities. The movement of organizing classes whenever and wherever they can be best organized is gaining ground. And yet this development argues no disposition on the part of these same progressive places to neglect instruction in evening schools. On the contrary, these latter also have been improving in a marked degree. Skilled supervisors, better trained teachers, definite courses of study, a socialized procedure—these factors have conspired everywhere to make the evening school of more recent years a place to which the immigrant turns with readiness and leaves without disillusion. The greatly increased evening-school enrollment everywhere attests this change. Note, for instance, the splendid growth in New York State between 1919 and 1921. When one considers that by far the greatest part of this increased registration is to be found in evening schools, it becomes evident that these are most decidedly increasing their holding power. That this is so, and that this same evening-school growth can be shown in Massachusetts, Rhode Island, Connecticut, Delaware, Ohio, and California, is one of the very best outcomes of the campaign for better immigrant education. If the Americanization movement had accomplished nothing else, this alone would have made it worth while.

TEACHER TRAINING.

Public-school authorities have appreciated keenly the necessity of special training for teachers of adult immigrants, and have in a very systematic way attempted this training. Reports from every State seriously engaged in immigrant education stress this activity. For example:

NEW YORK.

Teacher training is organized under a special director in the State Americanization division. Summer-school courses, carrying college or university credit, are a very prominent feature of this work. Last summer (1922) such courses, six weeks in length, were offered in Albany, New York State College for Teachers; Ithaca, Cornell University; Buffalo, State Normal School; Rochester, University of

Rochester; Syracuse, Syracuse University; Oswego, State Normal School; Plattsburg, State Normal School; New York, Hunter College; and Teachers College of Columbia University. The work at Columbia has been offered now for several years past; and very recently this institution has initiated the project of establishing what might be termed a "service station" for workers in Americanization, under the direction of Dr. Albert Shiels. In addition, the State Americanization division has spent money freely on teachers' institutes, and has left nothing undone to emphasize the fact that teaching adult immigrants is a task that calls for skill. The greatly increased registration in this State, already referred to, proves the wisdom of this policy. It must be noted also that, along with better teaching, New York has been emphasizing the need for trained organizers and supervisors as well. In 1920 approximately \$100,000 was expended on a central staff and on "zone directors," whose business it was to demonstrate how to set up and develop adequate plans of immigrant education. A marked decrease in the State appropriation has caused the partial disintegration of this corps, but the compelling importance of intelligent local leadership abides. The work in the larger cities especially is distinguished because of the quality of leadership displayed.

OHIO.

This was one of the first States to promote teacher training, and the Cleveland School of Education one of the first institutions offering courses in immigrant education during the summer term. Within the past two years this activity has been promoted zealously by the State division of Americanization. This division advertises a standard course of 40 hours, covering (1) the organization and administration of Americanization activities; (2) citizenship and naturalization; (3) methods; (4) racial backgrounds. During the year 1922 this course was given at Lakeside, Toledo, Cleveland, Cincinnati, and Youngstown. As in New York and other States, shorter courses of the institute type were offered in smaller communities, and still others given in cooperation with three of the State normal schools. In this connection mention must be made also of the excellent teacher-training material issued from the State Americanization office. The Ohio Manual for Teachers (Americanization Bulletin No. 2) is one of the best guides for teachers most recently made available.

DELAWARE.

The professional standards in immigrant education maintained in this State are very high, and the results achieved correspondingly good. All teachers recommended for appointment must have

completed satisfactorily a 30-hour course of training. This is supplemented by training in service which provides for monthly grade conferences, demonstration lessons, preparation and inspection of lesson plans, and supervision of classroom instruction.

Two teacher-training institutes were given in Delaware in the period covered by this report. They were held under the auspices of the Bureau of Immigrant Education and the Service Citizens' Americanization Bureau, and 103 teachers were thus trained. The State director reports that as the result of the work of these institutes and the supplementary activities above referred to Delaware has at present "an abundant supply of enthusiastic trained workers for teachers in school and home classes and helpers in the department of community Americanization." A satisfying situation is this and one not readily duplicated.

In other professional directions this State has also been very much to the fore. A careful study has been made of the special needs of illiterates among the non-English-speaking population, and reading lessons arranged especially adapted to them. This marks a distinct step ahead in immigrant education. At the same time an attempt has been made (beginning in 1919) to measure the instruction in schools for adult immigrants. A tabulation of the results of the tests, and comments thereon, may be found in the annual report of the department of public instruction (1922). They furnish information of great interest to those whose duty it is to improve educational opportunities for the immigrant.

The above is only indicative of what Americanization directors are doing throughout the country in this work of raising the standard of teaching. In Chapter III will be found further references to the activities of several other States, notably Connecticut, Massachusetts, and California. In Rhode Island, also, teacher training has been promoted assiduously by the State Americanization division, and the Rhode Island Normal College at Providence has for several years been used as a center for this work.

Finally, in this incomplete list one must include the very effective work of the University of Minnesota, which from the beginning, under the direction of Doctor Jenks, has served as a source of supply for hundreds of supervisors and teachers. It is obviously beyond the limits of this report to point out everything that has been achieved in this field. It seems almost slighting to give only passing comment to the teacher training in which some of our larger centers of immigrant population, Chicago and Pittsburgh especially, have engaged. But enough has been said to make it clear that, as a result of the new impetus given to immigrant education since 1915, the idea has become firmly established that teachers of immigrants must be specially trained. There remains now for our normal schools

and colleges to take over this training as an important phase of their instruction. That this will be the next step is very probable. The experience of California points that way.

FINANCING IMMIGRANT EDUCATION.

As yet no Federal aid has been forthcoming. Lacking it, States and local communities have borne the burden as best they could. A comparison of some of the financial provisions obtaining in different places is enlightening.

Massachusetts was one of the first States to provide by legislation for financial returns to cities and towns conducting immigrant education under State auspices. Reimbursement is on the basis of a dollar contributed for every dollar expended, with no limit fixed to the State appropriation; that is, the State pays half the cost. In 1922 the State's share under this arrangement was \$140,000. In addition, an amount approximating \$15,000 is appropriated annually for the activities of the director of adult alien education and his assistants. Other States that have adopted this "50-50" plan are Minnesota, North Carolina, North Dakota, New Jersey, South Dakota, and Maine (State pays two-thirds). It is to be noted, however, that in these others various limitations are prescribed. South Dakota, for instance, appropriates \$15,000 only. It is also to be noted that, excepting South Dakota and more recently Maine, no State office is set up, as in Massachusetts, to prescribe and carry out plans for immigrant instruction. There is no large guaranty, accordingly, that the money expended secures the greatest possible return.

In striking contrast to the Massachusetts idea is the plan in Ohio, where no State aid whatever is given to local communities. As a result these communities find it impossible to assume the burden of immigrant education. "It is out of the question for them to do so." Ohio, accordingly, resorts to the expedient of charging tuition fees. The following table shows how this is worked out in various localities:

Immigrant education in Ohio—Tuition, length of term.

Cities.	Tuition.	Length of term.	Cities.	Tuition.	Length of term.
Cleveland.....	\$2.00	12 weeks.	East Youngstown.....	\$1.00	3 months.
Cincinnati.....	3.00		Elyria.....	2.00	
Toledo.....	0		Martins Ferry.....	2.40	12 weeks.
Columbus.....	.50	Per month.	Canton.....	1.00	
Akron.....	0		West Park.....	0	
Youngstown.....	3.00	12 lessons.	Lafferty.....	1.00	Per week.
Lorain.....	5.00	36 lessons.	Rhodesdale.....	1.00	
Alliance.....	1.00	Per month.	Rossford.....	0	
Barberton.....	3.00	24 lessons.	Dayton.....	1.00	

* Refunded in case of 75 per cent attendance.
 * No refund; includes books.

* Registration fee.
 * Refunded for 85 per cent attendance.

Commenting on this plan, the State director says:

The result of this fee has been that attendance has been greatly stabilized. * * * To be sure, probably a great number of pupils who need most to come to school are excluded because of their inability to pay. Working conditions are better than last year, however, and more students are able to pay.

Several States may be mentioned together, which, unlike either Massachusetts on the one hand or Ohio on the other, have tried out the expedient of spending money directly in local communities. Delaware bears all costs of immigrant education, and in 1921 appropriated \$25,000 therefor. New York, in 1920, expended \$100,000 for home and factory teachers, appointed to serve in local communities. Connecticut's original plan provided for the part salaries of certain local directors. Pennsylvania and Utah also pay money direct. It is worth noting in this connection that the experience of both New York and Connecticut seems to prove the unwisdom of attempting to establish a system of immigrant education on this basis. In the case of New York this became very evident when the failure on the part of the State legislature to continue appropriating resulted in a setback to many activities that had been started in local communities.

The financing in New York during this past year has been practically on a dollar-for-dollar basis,² as in Massachusetts; and the Connecticut Legislature is this year considering a bill which incorporates, in effect, this same provision.

Another group of States reimburse local communities on an attendance basis. New York applies the idea of the wage grant to teachers. Connecticut at present aids to the extent of \$4 for each pupil attending 75 sessions. California, Nevada, New Jersey, Rhode Island, South Carolina, and Washington also apply this idea. Among these it is to be noted that only California and Rhode Island provide likewise State leadership and State machinery.

A careful study of the financing and administration of immigrant education the country over seems to make safe the following conclusions:

1. The education of the adult immigrant in English and citizenship is a public responsibility, and the cost thereof should be borne in proper proportions by the local community, the State, and the Federal Government. As yet, the Federal Government has failed to do its part. This furnishes no excuse for State legislatures to be similarly delinquent. Teaching the adult immigrant costs considerable money—more money than local communities can, unaided, afford to spend.

²A very clear analysis of New York's plan of State aid is found in "Administration and Organization of Immigrant Education in New York," by John L. Riley, published by the University of the State of New York, Albany.

The failure of New Hampshire, as a State, to accomplish what it gave promise of accomplishing three years ago may be traced directly to the failure on the part of the State legislature to make even reasonably adequate appropriations for carrying into effect the admirable plans adopted. On the other hand, those States where results have been attained—Massachusetts, Rhode Island, Connecticut, New York, South Dakota, Delaware, Ohio, and California—are, except in the case of Ohio, States where financial aid to local communities has been forthcoming. There is much idle talk now, as several years ago, about plans for wiping out illiteracy and non-English speaking through compulsory registration and through other means. The plain truth is that this is a task that calls for skilled administration, good supervisors, and good teachers—plenty of them. This means money, considerable money, spent under wise direction for a period of years.

Our experience to date is convincing that the imposition of this burden on the immigrant himself, on the local community alone, or on the State alone is not a satisfactory procedure. The State and the local community should between them "foot the bills."

2. The State should create administrative leadership; preferably in the State department of education. State financial support is worth while only in proportion as it is spent to carry out a State plan of immigrant education, wisely conceived and skillfully administered. Reimbursing the old-time evening schools will not avail much in the difficult task of eliminating the language barrier. Immigrant education is a specialized type of schooling that needs teachers specially trained. There is even a more crying need for leaders specially trained. State funds are spent judiciously only where these leaders are in charge, both in local communities and over a state-wide area.

3. There should be a minimum of State machinery and activity and a maximum of local responsibility and control. Experience has proved that permanent success in this work demands that we throw the initial responsibility on the local community. The State may easily do too little, by way of promotion, as has New Hampshire for three years past. The State may easily do too much, as New York attempted to do, with its liberal State appropriations in 1920. Once again the immigrant is the ward not of the local community alone, but of the State and the Nation as well. All should share in the cost of the Americanization process. But in accordance with the spirit of American education, the prime responsibility should attach to the community where the immigrant resides.

WHAT SOME OF THE STATES HAVE DONE.

CALIFORNIA.

There are over 600,000 foreign-born whites in California, and of these, approximately 230,000 are adult aliens. The following table indicates how the different nationalities are represented:

Italy.....	88,502	Russia.....	27,224	Switzerland.....	16,097
Mexico.....	86,610	Portugal.....	24,517	Austria.....	13,264
Germany.....	67,180	Denmark.....	18,721	Greece.....	10,313
Sweden.....	31,925	France.....	18,523	Norway.....	11,460

In addition to the 681,662 foreign-born white immigrants, California has the following non-English-speaking peoples:

Indians.....	17,360	Chinese.....	28,812	Japanese.....	71,952
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The following counties have more than 10,000 foreign born:

Los Angeles.....	186,000	Sacramento.....	23,000	Orange.....	10,000
San Francisco.....	153,000	San Diego.....	21,000	Santa Barbara.....	10,000
Alameda.....	82,000	San Joaquin.....	20,000	San Mateo.....	12,000
Fresno.....	32,000	San Bernardino.....	15,000	Sonoma.....	10,000
Santa Clara.....	24,000	Contra Costa.....	15,000		

California's very sizable problem has been handled with intelligence and skill. Just 10 years ago (1913) the Commission on Immigration and Housing was established by law and given very wide powers to deal with the protection and aiding of immigrants.¹ For 10 years it has been investigating various phases of the immigrant question, and has made very valuable contributions to the science of the subject. Its activities have included studies of educational conditions and of teaching methods, evaluation of results obtained in local communities, publicity campaigns, legislation, teacher training, administration of compulsory part-time classes for minors, and, more recently, community organization. Some of its aims and accomplishments have been set forth in bulletin form. Among these bulletins may be especially noted:

- a. The Home Teacher Manual.
- b. Primer for Foreign Speaking Women.
- c. A Plan for a Housing Survey.
- d. Fresno's Immigration Problems.
- e. Heroes of Freedom.

¹ See Appendix D.

It should be said, in passing, that the California plan of Americanization is deserving of a special study, because, as Miss Helen Hart has pointed out, there is a distinct recognition of the close relationship between the formal instruction of the immigrant and other State activities on his behalf which are no less a part of his introduction to the life of the American community.

California has admitted that her obligation to her foreign-born residents goes beyond the classroom and that all those who are working to discharge that larger obligation are in reality part of one program, animated by a common purpose and a common spirit. I feel very strongly that our systems of immigrant education must either be enlarged to meet more and more of the immigrants' general needs or must be made a part of a larger program which will use every medium to bring the foreign born of the State into the closest possible relationship with the American community.

During the period 1920-1922 the work of immigrant education proper has been carried on under the immediate direction of the State department of public instruction, through an assistant superintendent, especially assigned to this task. The assistant superintendent (Miss Ethel E. Richardson) has charge of the schooling not only of foreign-born adults but of non-English-speaking children as well. California, unlike most other States, recognizes that such children need special treatment in school. The following brief summary is proof of this fact:

EDUCATION OF NON-ENGLISH-SPEAKING CHILDREN.

(1921-1922.)

Normal schools and teachers' colleges in Fresno, San Jose, San Diego, and San Francisco, and the southern branch of the State university offered special courses with demonstration lessons for teachers of immigrant children. A noteworthy training center has been established in the Italian quarter of San Francisco. This work started with a special study of a group of children in the primary grades. The progress of this group up through the grades is receiving careful attention to determine the best methods of teaching such pupils.

In addition to the training courses, the State department assigned a full-time expert to work as a field agent in several counties in the State.

Several cities in California, notably Los Angeles and San Diego, have established "pre-primer classes." In this class the emphasis is almost entirely on oral English. It has been proved that the children who spend a year in this class show little or no retardation

* Extract from Miss Hart's address before Interstate Council on Immigrant Education, Atlantic City, Mar. 1, 1921.

when transferred to the regular classwork. Definite provision has been made for the work with immigrant children in the new State course of study. The recognition of the traditions and ideals in the pupil's racial heritage is emphasized to bring out the best of such contributions in his new life in America. The advantages in the important task of promoting intelligent racial tolerance in our democracy can not be overestimated.

EDUCATION OF NON-ENGLISH-SPEAKING ADULTS.

In the field of adult instruction California has made great progress in the strictly professional task of raising educational standards. Note the following evidences:

1. *Teacher training*.—Quoting from a recent report of the State supervisor of immigrant education:

In another year there will be practically no teachers of adult immigrants who have not had special training. Three things have made this possible:

- (a) Greater facilities for training courses.
- (b) More stringent requirements for the secondary credential in citizenship.
- (c) Recognition of the importance of special training by school superintendents and supervisors.

Courses for teachers of immigrants have been offered in the summer schools of the university at Berkeley and Los Angeles; at the University of Southern California; and at the Teachers' College at San Jose and San Francisco. In addition to the summer courses, special training facilities have been offered by the extension division of the University of Southern California in more than 15 centers throughout the State.

2. *Citizenship program*.—A comprehensive program of "Citizenship through education" was formulated by a committee working under the president of the State university. This plan in operation will provide a department of immigrant education in the university's school of education.

The needs of the schools have been defined as follows:

1. Teachers who can deal with non-English-speaking children in the primary grades.
2. Teachers who can deal with older non-English-speaking children who have been educated in their own country but can not fit into their grade in an American school because of their language handicap.
3. Teachers who understand the social forces in America that are making for the assimilation of the immigrant and can make the public evening school take its place as an important element in the general scheme.
4. Teachers with executive ability who can organize and supervise the immigrant education program in a school system.
5. Teachers with training in civics and an understanding of modern questions—political, social, industrial—who can teach citizenship to adults.

REQUIREMENTS FOR TEACHERS OF ADULT IMMIGRANTS IN CALIFORNIA.

Applicants must be graduates of a college or normal school with four years' teaching experience, plus at least six units of special study of the teaching of modern language, the problems of immigration, and one allied subject.

State approval for all teachers in adult classes is an established procedure in California.

Enrollment in adult classes conducted in cooperation with the State department.

(a) 1920-1921:

1. Number of cities conducting classes.....	22
2. Number of classes.....	269
3. Number enrolled.....	9,108
4. High-school districts conducting classes.....	35
5. Number of classes in districts.....	77
6. Number enrolled.....	1,360

(b) 1921-1922:

1. Number of cities conducting classes.....	28
2. Number of classes.....	402
3. Number enrolled.....	14,741
4. High-school districts conducting classes.....	52
5. Number of classes in districts.....	140
6. Number enrolled.....	3,554

OHIO.

Foreign-born population in the State of Ohio.

1. Total foreign born.....	678,697	3. Adult aliens.....	218,288
2. Per cent of total population.....	11.800	4. Adult illiterates.....	126,645

Largest groups from non-English-speaking countries.

Germany.....	111,893	Russia.....	48,690
Hungary.....	73,181	Czechoslovakia.....	42,121
Poland.....	67,579	Jugo-Slavia.....	30,377
Italy.....	60,658	Greece.....	13,540
Austria.....	48,073	Rumania.....	13,068

Cities with largest foreign-born populations.

Cleveland.....	239,538	Youngstown.....	33,834
Cincinnati.....	42,827	Columbus.....	16,055
Toledo.....	38,145	Dayton.....	13,111
Akron.....	37,889		

Americanization in Ohio was started during the war as an activity of the Ohio State Council of National Defense. The work of this organization resulted in the Americanization legislation of 1919, which established an Americanization committee for Ohio with a director and assistants, and assigned to them wide powers. Two years later, in 1921, this Americanization act was rewritten.

The most important feature in the revised law was the establishment of a division of Americanization in the department of education. The State supervisor of Americanization under this law is appointed by the governor. The division personnel at the present time consists of a supervisor, assistant supervisor, supervisor of teacher training, and a secretary. The State supervisor is authorized under this law to appoint an advisory committee. This committee at the present time consists of several representative men

and women from different sections of the State. Unlike the majority of States having State direction of Americanization, Ohio has not enacted the "State-aid" provision in any legislation. Local communities pay for the entire cost of teaching and supervising classes for adult foreigners.

The service of the State department consists in—

- (a) Promotional work to "encourage patriotic education and assimilation of foreign-born residents."
- (b) Teacher training.
- (c) Providing of standard courses of study for English and citizenship classes.
- (d) Establishing effective cooperative relations between the schools and the Federal Bureau of Naturalization.
- (e) Providing special lesson materials for students.
- (f) Organizing community meetings and demonstrations for both native and foreign born.

SIGNIFICANT ACHIEVEMENTS IN SEVERAL OHIO COMMUNITIES.

The most recent Ohio report, "Adult Education in Ohio," contains a summarized statement of the Americanization work in the following centers:

Akron.	Cleveland.	Toledo.
Canton.	Columbus.	Youngstown.
Cincinnati.	Lorain.	

Special mention is made of such important developments as—

1. Securing cooperation of public and private agencies under school leadership.
2. Organization of student councils.
3. Establishment of all types of classes—evening school, factory, club, and home.
4. Public welcome meetings to new citizens.
5. Social and educational programs at American House in Cincinnati.
6. Establishment of information bureaus in Cleveland and Toledo.
7. Special classes for negro illiterates.

REPORT ON SCHOOL ENROLLMENT, 1921-22.

The totals include enrollment in classes in public schools and in classes conducted by social agencies.

1. Cities of 25,000 or more:

(a) Number of cities conducting classes.....	16
(b) Number of classes.....	738
(c) Enrollment in night school.....	25,978

2. Cities of 10,000 to 25,000:

(a) Number of cities conducting classes.....	9
(b) Number of classes.....	57
(c) Enrollment in night school.....	1,032

3. *Cities over 2,500:*

(a) Number of cities conducting classes.....	11
(b) Number of classes.....	60
(c) Enrollment in night school.....	747

4. *Cities under 2,500:*

(a) Number of cities conducting classes.....	7
(b) Number of classes.....	23
(c) Enrollment in night school.....	437

PUBLICATIONS.

a. "Americanization in Ohio." (Bulletin 1920.)

The bulletin "Americanization in Ohio, a Constructive Program for Communities Having a Foreign Problem," was prepared and distributed in September, 1920. This pamphlet contains outlines and suggestions for teacher-training courses—helps in organization of classes—and directions for teachers on the problems and methods and lesson materials. In addition to the helps for directors and teachers, there are specific suggestions for the cooperation of the following agencies:

- | | |
|-------------------------|-------------------------|
| 1. Chamber of commerce. | 5. Day schools. |
| 2. Industries. | 6. Churches. |
| 3. Civic organizations. | 7. Immigrant societies. |
| 4. Libraries. | 8. General public. |

b. "Fundamental Facts for New Citizens." (Bulletin 1922.)

This pamphlet contains a course of study for naturalization classes. The material is organized in 20 chapters and was selected from the general field of citizenship course material with the special aim of preparing "petitioners" for the naturalization examination.

c. "Teacher's Manual." (Bulletin 1922.)

This pamphlet is generally recognized as one of the very best manuals for teachers of immigrants. The suggestions for grading, course of study, and use of the direct method are especially well presented. The statement of the aims in the work in intermediate classes is both definite and feasible. The bulletin was prepared on the basis of several years' experience in teacher-training courses.

NEW YORK.

THE FOREIGN-BORN POPULATION IN NEW YORK STATE.

The following statistics are taken from the 1920 Federal census report:

1. Total foreign born.....	2,786,000
2. Per cent.....	20.9
3. Adult aliens.....	1,011,000
4. Adult illiterates.....	415,360

THE NON-ENGLISH-SPEAKING FOREIGN BORN IN NEW YORK STATE AND
NEW YORK CITY.

The huge foreign-born population in New York City includes a very large per cent of the total foreign born for the State. The following table indicates the numbers of non-English-speaking immigrants in the 12 largest groups in the State and in New York City:

	New York State.	New York City.
Italy.....	545,200	390,800
Russia.....	529,200	479,800
Germany.....	295,600	194,100
Poland.....	247,500	145,700
Austria.....	151,100	126,700
Hungary.....	78,300	64,400
Sweden.....	53,000	33,700
Rumania.....	40,000	38,100
Czecho-Slovakia.....	38,200	26,400
Norway.....	27,500	24,500
Greece.....	26,000	21,500
France.....	25,000	19,450

OTHER CENTERS OF FOREIGN-BORN POPULATION IN NEW YORK STATE.

Albany, Buffalo, Rochester, Utica, Schenectady, Troy, Binghamton, Niagara Falls, Yonkers, and Syracuse are the 10 cities having more than 2,000 foreign-born unable to speak, read, and write English. Public-school evening classes for these immigrants were conducted in a number of the large cities for many years before the war and "Americanization," so called.

LEGISLATIVE ENACTMENTS.

In 1918 the New York State Legislature enacted a law requiring the compulsory attendance of all "illiterate minors," so called, at evening school. At the same time appropriation of \$20,000 was made for teacher-training courses in Americanization to be expended under the direction of the commissioner of education. In the following year (1919) Americanization was very definitely set up as a State activity when the legislature made possible the expenditure of nearly \$300,000 for this work. Of this amount \$100,000 was spent by the State department in putting home and factory teachers directly into the local communities. In addition, a large central organization of supervisors and directors was provided for, and under the direction of "zone directors" the work was vigorously prosecuted. Within a year, however, this auspicious beginning received a decided setback when the legislature embarked on a policy of retrenchment. The situation was saved, however, when in 1921 the legislature voted to establish immigrant education on the "State-aided" basis, practically as in Massachusetts.

The budget for the State department was obviously curtailed, but sufficient funds were appropriated to cover the salaries of a State supervisor and several assistants. The teacher-training program was carried out in the several summer schools as formerly. Fewer courses were conducted during the school year in local communities.

It is generally believed to-day that immigrant education in New York State is in a healthier condition under the present State-aid plan than it was under the "State-control" idea of 1920.

ACCOMPLISHMENTS UNDER STATE DIRECTION.

1. *Copying Federal census records.*—No more accurate survey of the non-English-speaking population over a State-wide area was ever made than that undertaken under State auspices in 1920. A staff of clerks was assigned to the task of copying from the Federal census the names of people 21 to 50 years of age who could not read or write any language or could not speak English. These accurate lists were turned over to the 320 superintendents of schools for the purpose of enrollment in evening-school classes. Thousands of these immigrants were visited in their homes by representatives from the schools and invited to join the English and citizenship classes. No report is available as to the number of visits made and the response as shown in school attendance. The increase in school enrollment for the year was more than 100 per cent over the previous year. Undoubtedly the lists helped immensely in increasing the enrollment.

2. *Appointment of local directors.*—During the school year 1918-19 there were 17 local directors of immigrant education in New York State. Under the stimulus of State leadership 20 additional directors and supervisors were appointed in the year 1919-20.

3. *Teacher training.*—The State-wide program of teacher-training courses launched in 1919 was enlarged in 1920, and a competent staff of experts assigned to this work. Courses were conducted in more than a dozen educational centers as part of the summer-school programs. In addition to the summer work, field agents conducted part-time courses in every center where a group of interested teachers expressed a desire for this very necessary help. It is doubtful if any State in the Union has been able to conduct the number of special training courses which New York offered during this period.

REPORTS ON SCHOOL ENROLLMENT.

1. *1919-20 reports.*—Total registration, 56,025. This total is divided among five types of communities, as follows:

1. Cities of 100,000 population and over	43,799
2. Cities of 50,000 to 100,000	3,431
3. Cities of 25,000 to 50,000	3,177
4. Cities and villages 10,000 to 25,000	3,039
5. Cities and villages less than 10,000	2,579

2. 1920-21 reports.—(a) Total registration, 82,490. (b) Increase over preceding year, 26,465.*

This total (82,490) is divided among five types of communities, as follows:

1. Cities of 100,000 population and over.....	65,767
2. Cities of 50,000 to 100,000.....	4,852
3. Cities of 25,000 to 50,000.....	4,377
4. Cities of 10,000 to 25,000.....	3,424
5. Cities and villages (less than 10,000).....	4,070

3. 1921-22 reports.

1. Cities of 100,000 population and over.....	80,313
2. Cities of 50,000 to 100,000.....	4,612
3. Cities of 25,000 to 50,000.....	3,725
4. Cities and villages 10,000 to 25,000.....	3,156
5. Cities and villages less than 10,000.....	1,722
6. Scattered places.....	925

Grand total 94,453

Increase in enrollment over previous year, 11,963.

PUBLICATIONS OF NEW YORK STATE DEPARTMENT OF EDUCATION
RELATING TO IMMIGRANT EDUCATION.*

Administration and organization of immigrant education. 1922.
Immigrant in industry (in preparation).
Educational opportunities for women from other lands. 1920.
Twenty lessons in English for non-English-speaking women. 1920.
Course of study in elementary English for foreign-born adults (in preparation).
Methods of teaching English to non-English-speaking foreign born. 1919.
Devices for drill and review in English. 1921.
Course of study in citizenship for foreign-born adults (in preparation).
Teachers' handbook in citizenship, naturalization, and the voting system. 1921.

DELAWARE.

IMMIGRANT EDUCATION IN DELAWARE, 1919-1922.

During the war the Delaware State Council of Defense organized an Americanization committee. Like similar committees in a score of States, this group of interested citizens aroused keen public interest in the large foreign-born population. After the council of defense disbanded, the Americanization program was taken over by the Service Citizens in January, 1919. This organization recognized the immediate need of a constructive program of immigrant education. No public funds were available early in the year, so that the first program of classes was organized and supported by the Service Citizens. A State appropriation was made in July, 1919, and 30

*This list was selected from a more complete list of books and references compiled and arranged by Caroline A. Whipple, specialist in immigrant education, State department of education, New York.

classes were turned over to public control. This demonstration is undoubtedly the best contribution of any patriotic organization to the cause of educational Americanization in the country.

The first State appropriation for this work amounted to \$15,000 a year for two years. This was intended to finance such public-school classes as might be organized by the State director of immigrant education. Classes were conducted under the immediate control of local school departments, although the costs were paid from the State treasury. The city of Wilmington and four towns conducted classes during the first year. A census showed a foreign-born population in Delaware of 17,000, of whom 6,000 were non-English-speaking, largely Italian and Russian. The educational program was enlarged during the fall of 1919 and an advertising campaign was conducted. Posters, booklets, notices, etc., were prepared and printed in six foreign languages. The fall term opened with a large enrollment, as shown by the following table:

Wilmington	971
New Castle	71
Stanton and Newport	23
Claymont	86

A student advisory council was organized at this time, and the advice of the immigrants proved very helpful in reaching their fellow countrymen with the message of public-school opportunities. A program of work with foreign mothers was launched. Seventy-five immigrant women attended classes, learned English, and were helped in solving some of the very difficult problems which confront the foreign-born mothers in America.

An Americanization training course was offered in Wilmington during the first year. In addition to the classroom work, the Delaware educational program included a number of socialized school meetings. Native and foreign born attended these meetings in large numbers. Exhibits of the homelands were staged as part of the closing exercises in every community. This feature was appreciated by the immigrant women. Many of them had been led to believe that their treasures were distinctly out of place in their adopted land.

During the second year of the work under State auspices the school enrollment increased to 1,193. The attendance during the third year approximated 1,200 students. These records afford conclusive proof of the high quality of the school program.

Space will not permit any detailed comment on the many important phases of the professional accomplishments of the Delaware program. Teacher-training courses have been conducted each year since 1919, and as a result there is now an adequate supply of trained workers available. In addition to the teaching problems, these courses have included the study of such topics as Viewpoints on

Americanization—Racial backgrounds—The immigrant and the community—Immigrant neighborhoods in Delaware—etc.

Summing up the accomplishments of the three-year program of immigrant education under public-school auspices in Delaware, it is a fair statement that upward of 2,000 foreigners have been helped by trained public-school teachers to use the language of America and to understand the fundamentals of real Americanism. In addition, several hundred aliens have been instructed in citizenship classes and have taken the oath of allegiance to the United States after a period of schooling in the duties and responsibilities of the good citizen.

WORK OF THE SERVICE CITIZENS' AMERICANIZATION BUREAU, 1919-1922.

The function of the Service Citizens' Americanization Bureau has been to organize and develop those facilities which the foreign-born resident of the State most need in order to participate in the life of the American community; and, whenever possible, to turn over such facilities to public control after their usefulness has been clearly demonstrated.

The three years' record of the work of this organization has proved that such a laudable function for any civic organization has not only been clearly visualized in the minds of the executives of the bureau but has been realized in practical activities, viz:

1. Organization of evening-school classes early in 1919 and transfer of a score of classes to public educational authorities as soon as public funds were available.
2. Organization in 1920 of a department of community Americanization and subsequent transfer to the State department of immigrant education.
3. Organization of important supplementary activities (public meetings, recruiting campaigns, teacher training, and home classes), direction of the same turned over to public authorities, although still financed by the organization.

The home-class experiment was carried through under a very thoroughgoing plan. Careful records were kept of the enrollments and the reasons for absence. Special lessons were prepared to meet the limited abilities of the illiterate women, and their immediate needs for simple English expressions about their home and store contacts. The experience with these small groups was such as to justify a strong recommendation that the work be supported by public funds.

The following table summarizes the work of the bureau as outlined in the three annual reports, 1919-20, 1920-21 1921-22:

1. Organization of evening-school classes.
2. Securing State support for immigrant education.
3. Organization of Americanization committee.
4. Survey of foreign born in Delaware.
5. Teacher training.

Bulletin, "Americanization in Delaware, 1921-22."

6. Night-school publicity.
7. Citizenship classwork and public receptions to new citizens.
8. Community gatherings.
9. Work with foreign mothers.
10. Establishment of Trouble Bureau for Immigrants.
11. Legal aid.
12. Printed information for the foreigner.
13. "Steamer" classes for immigrant children.
14. Establishment of community Americanization centers.

During the year 1922 the chief work of this organization has centered in the Trouble Bureau. That this service is recognized and appreciated by the immigrants may best be shown by the records for the year 1921-22, during which time 1,130 cases were handled for 768 individuals from 38 different countries.

The work of the Trouble Bureau has stood to the foreign-born people of Delaware as proof that their American neighbors want to help them to solve their problems. But its real function will not have been realized until we learn how to bring it about that many of these problems shall not arise.*

SOUTH DAKOTA.

THE FOREIGN-BORN POPULATION IN SOUTH DAKOTA.

South Dakota is an agricultural State, with a foreign-born population of 82,000, 13 per cent of the total population. According to the 1920 Federal census, 61,800 of the immigrants have been naturalized or have taken out first papers. The following table shows the several largest racial groups in this State:

Norwegian	16,800	Swedish	8,500
German	15,600	Danish	6,000
Russian	11,100	Finnish	1,000

The percentage of illiteracy among the foreign born is unusually small, 7 per cent.

A RURAL PROBLEM.

South Dakota is the only rural State in the Nation to undertake a State-wide Americanization program for the foreign born. All of the immigrants are engaged in agricultural pursuits with the exception of those employed in the mining districts of the Black Hills. The accomplishments of the immigrant educational program in this State during the past three years are all the more noteworthy when one considers the many difficulties in organizing classes among adults who are scattered over a wide area.

* A complete and very stimulating account of Americanization activities in Delaware is set forth in the bulletins of the Service Citizens of Delaware (1919-20; 1920-21; 1921-22). The most recent report of the State director of immigrant education (1922) should be read also. It tells a story of marked achievement.

LEGISLATION.

In 1919 the legislature enacted a law (ch. 169) to promote Americanization. This statute includes several important provisions:

1. Compulsory school attendance for persons between the ages of 16 and 21 who do not speak, read, and write English.
2. Establishment of evening schools.
3. Required evening-school term, four sessions of two hours each week for 25 weeks.
4. State appropriation of \$15,000 for two years as payment of one-half the expenses of conducting classes.

STATE LEADERSHIP.

Following the enactment of this law, a State director of Americanization was appointed in the department of public instruction. Plans were formulated for the opening of evening schools in a number of communities in the fall of 1919. Conferences were held in 18 counties and considerable enthusiasm was aroused among local authorities for the work. The university in the adjoining State of Minnesota organized a comprehensive course on Americanization. Several communities in South Dakota elected leaders from the students who completed the work in this university course.

PUBLICATIONS.

A booklet, "Americanization in South Dakota," was distributed in 1919. This publication contains a statement of the law, an excellent analysis of Americanization, regulations for the organization and conduct of the schools, suggestions for the cooperation of interested public and private agencies, lists of texts for students and reference books for teachers, and specific recommendations about the need for trained teachers.

"Patriotic and Civic Instruction" is the title of a second pamphlet which was distributed in 1921. This booklet is a teacher's manual on the teaching of patriotism. It contains an excellent selection of poetry and prose adapted to the recognition of the different holidays. The booklet also contains an interesting report of the progress in the Americanization classes, with samples of the students' work.

REPORTS ON SCHOOL ENROLLMENT.

The following table is taken from a report issued by the State director of Americanization: 1919-20, 625 students; 1920-21, 1,002 students; 1921-22, 860 students.

The director's comment on this enrollment is as follows:

We anticipate decreasing attendance each year, due to the fact that in rural and small village communities an evening school fulfills its mission in the course of two or three years. Several of our schools will be discontinued this year because there is no further need for them.

Obviously the State of South Dakota has not been receiving new immigrants in any considerable number since before the war. A successful demonstration has been made, however, and 34 schools have been established throughout the State. Other rural States may well copy the program of education in English and citizenship which South Dakota has provided for its rural immigrants.

CONNECTICUT.

THE FOREIGN-BORN POPULATION IN CONNECTICUT.

The 1920 Federal census report shows the following:

1. Total foreign born	378,000
2. Per cent of foreign born	29.5
3. Adult aliens	160,000
4. Adult illiterates	63,000

The five largest racial groups from non-English-speaking countries are:

1. Italians	80,300
2. Poles	46,600
3. Russians	38,700
4. Germans	22,600
5. Swedes	17,700

The foreign-born population is located in both the rural and urban districts.

LEGISLATION.

The following statute providing for a department of Americanization under the direction of the State board of education was enacted by the legislature in 1919:

DEPARTMENT OF AMERICANIZATION.

The State board of education shall establish a department of Americanization and appoint a director of such department who shall receive an annual salary of \$3,000 and his necessary expenses. Such director shall have such powers and perform such duties as may be prescribed by the State board of education, but said director shall not be authorized to exercise authority over the conduct of any public school, school board, or board of education or any teacher or other employee of any public school.

The school committee of any town designated by the State board of education may appoint, subject to the approval of said board, a town director of Americanization whose compensation shall be fixed and paid by the State board of education.

The State board of education appointed a director of Americanization in July, 1919.

This law did not provide for State reimbursement of the cost of instruction of aliens, although State aid has been paid for a considerable part of the cost of evening classes under the provision of an earlier statute which grants a State rebate of \$4 for each pupil in average attendance of 75 sessions. A number of local directors were appointed under the provisions of the Americanization law.

STATE LEADERSHIP.

The State director of Americanization issued a series of circular letters in 1919 on the following subjects:

1. Duties of local directors.
2. Americanization in rural communities.
3. Americanization for women and women's organizations.
4. Americanization for religious bodies.
5. Americanization in industry.

These letters outlined the most significant activities in local Americanization programs, the steps to be taken in securing the interest and support of all groups, native and foreign; and the course of study with time programs for the three grades of work with immigrants.

A special agent in charge of teacher training was appointed in 1920, and the necessary helps for teachers were presented in training courses in local communities during the school year and in the summer school at Yale University. The publicity program was especially well organized in Connecticut. In addition to the work of preparing and distributing more than 10,000 posters in seven foreign languages, the State director employed a foreign-language speakers' bureau of naturalized citizens to assist at the hundreds of Americanization meetings which were conducted in every part of the State. A motion-picture film, "The Making of an American," was prepared under the direction of the State department. This film was shown to more than 100,000 persons in Connecticut, and stimulated public interest in Americanization more than any other publicity feature. In fact, this film has been the only motion-picture prepared for the special purpose of "selling" the need for education in English and citizenship to immigrants.

A bulletin, "Classes for foreign-born adults—Organization and maintenance," was prepared and distributed in 1920. This pamphlet provided definite directions and helps on such subjects as teachers, location and equipment of classrooms, school year, curriculum, publicity, attendance reports, materials, etc. Supplementary bulletins, with news notes and suggestions for teachers, have been sent to local leaders during the past two years.

During the summers of 1921 and 1922 the State department conducted an unusual demonstration training course for teachers of immigrants. A model evening school was opened near the Yale summer school at New Haven. Classroom methods and practices were studied, and opportunities provided to more than 100 teachers to observe the work in this demonstration center.

SCHOOL ENROLLMENT.

The most recent returns available for Connecticut (1921-22) show 15 communities carrying on their work in immigrant education in cooperation with the State department of education. In 50 different schools 207 different classes were operating. The active registration was 5,398. The same report tells of over 30,000 cases that were handled through the information bureau during the first year of the work under State auspices.

PROPOSED LEGISLATION.

During the present session of the Connecticut State Legislature a bill is being considered which would provide State reimbursement of one-half of the expense of instruction to cities and towns conducting immigrant education in cooperation with the State department of education. The bill resembles the legislation enacted in Massachusetts in 1919.

MASSACHUSETTS.

THE FOREIGN-BORN POPULATION.

The Federal census of 1920 gives the foreign-born population of Massachusetts and the illiterates as follows:

1. Total foreign born	1,063,000
2. Total aliens	442,351
3. Total illiterates	142,750
4. Unable to speak English	96,426

THE STATE PLAN.

The Massachusetts statute which established immigrant education as a definite function of the State department of education is generally regarded as a model for other States. (See Appendix.) Briefly, it incorporates the following features:

(a) Classes in immigrant education are to be set up and conducted by local school authorities who, in the first instance, assume all expenses therefor. The responsibility is thus placed on the local community, where it belongs.

(b) Such classes may be organized at any time or in any place, subject to approval of the local board of education.

(c) Classes conducted in cooperation with the State department of education, and in conformity with its suggestions, shall be supported from the State treasury, through reimbursement, to the extent of one-half the cost for all expenses of instruction. (This reimbursement for 1922 amounted to \$140,000.)

The Massachusetts plan has been in operation since September, 1919, when the above statute went into force. At that time a State director of Americanization was appointed, and within a short time two assistants, to take charge of teacher training and of the organization of factory classes. In the period under consideration (1920-1922) the plan of immigrant education formulated in the State office was adopted by practically every city and town that handled this activity. In 1922, 98 of these were thus cooperating, and in the great majority of these places the work locally was under the direction of a skilled supervisor, specially trained. The quality of teaching during the same period has also been greatly improved. For three years past Massachusetts teachers have attended in large numbers the summer training courses both at Harvard and at the Hyannis Normal School. In addition, the State department has conducted a steady succession of courses in all the cities and in many of the towns, thereby insuring a continuous supply of interested instructors. As a result of this steady insistence on special training, Massachusetts, like Delaware and Connecticut, is now adequately supplied with teachers skilled in their task.

GROWTH IN NUMBER OF STUDENTS.

The increase from 3,381 to 22,242, as shown in the figure, represents a growth of 560 per cent in three years. This is significant indeed as tending to answer conclusively two questions often raised:

1. *The adult immigrant given an opportunity will go to school.*—Attendance in all these classes, be it noted, is wholly voluntary, and usually comes at the end of a hard day's work.

2. *Public interest in the education of the immigrant has not waned since the war.*—Massachusetts refuses to regard this phase of Americanization as a war activity. And the cities and towns of Massachusetts, having started the work of removing the language barrier, seem determined to put this task through and to pay the cost therefor.

Growth in classes of different types.

	1918-19	1919-20	1920-21	1921-22
Total number of adult immigrants belonging in all classes.....	3,381	9,030	20,475	22,242
Number of evening school classes.....		420	750	855
Number of factory classes.....		131	327	308
Number of neighborhood and club classes.....		92	248	294
Total number of classes.....		643	1,325	1,515

Naturally, the largest increase in the number of classes is found in the evening schools.

The increase in the number of neighborhood and club classes from 92 to 294 indicates an awakening of the interest of immigrant organizations in the public-school opportunities for learning English.

The rather extraordinary development of the "factory class," as above indicated, has already been set forth and needs no further comment.

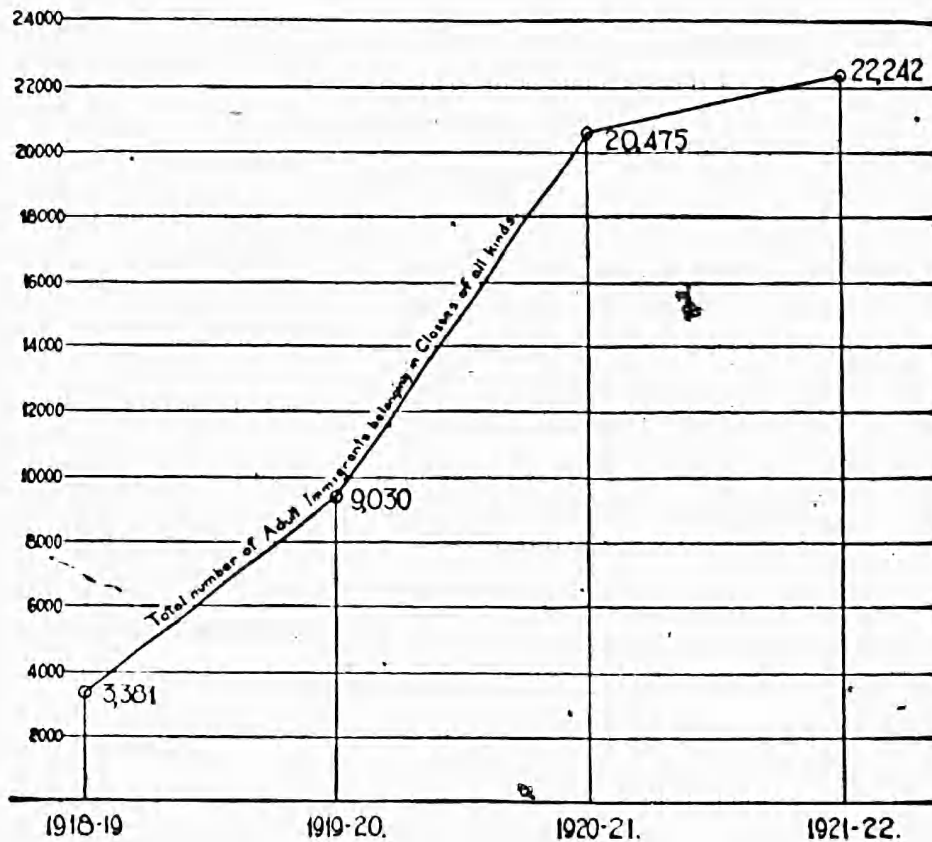


FIGURE 1.—Adult immigrants in classes.

SECURING THE COOPERATION OF THE IMMIGRANT.

Various factors, obviously, have contributed to the development of immigrant education in Massachusetts. Doubtless one of the most powerful of these has been the active interest taken by the immigrants themselves in promoting its spread. Massachusetts, like Delaware, has from the outset tried to enlist the help of immigrant groups in recruiting classes. That this has been worth while, the following quotation seems to prove:

The later Pilgrims to our shores have been eager to take their part in the building of America, and realizing that the first step is the acquiring of the language and history of their new home, have zealously applied themselves to the task.

Clubs of Lithuanians and Greeks in Haverhill, Finns in Quincy, Russians in Peabody, and Italians in Wakefield have all given the use of their clubrooms for classes in English and citizenship; while a Portuguese club in Plymouth, a Polish club in Chelsea, Hebrew and Armenian clubs in Lowell, as well as Italian clubs in Belmont, Nahant, Beverly, and Northampton, have taken the initiative by asking for teachers and recruiting the classes. The Poles of Hatfield asked for a speaker from the school department for an open meeting of their club, after which they recruited several large classes.

A desire to give to the community, as well as to get from it, is increasingly evident among them. An Italian publication often prints articles to create a public opinion favorable to Americanization. The band of an Italian musical club in Wakefield turned out to a man and furnished music of a very high standard gratuitously for graduation. In Everett the Sons of Italy solicited and signed an agreement with the school department for the promoting of citizenship and the forming of classes. In Cambridge a Russian church choir contributed several musical numbers to the program of the evening-school graduation. In Holyoke six immigrant organizations paraded on the streets to celebrate Columbus Day, and mass meetings to stimulate citizenship were conducted by the Poles themselves. Webster boasts an American Citizens' Club of all races, pulling as one for the promotion of good citizenship, holding public meetings, recruiting classes, and celebrating holidays together.

Nor are the women and children an unknown quantity in this service for our country. In Springfield a Jewish mothers' club has made a house-to-house canvass to gather members for classes in English and in household arts, and the children of the Polish parochial school in Cambridge have distributed some 400 circulars. In New Bedford 48 classes with over 900 students are learning our language and preparing for citizenship in the friendly informal environment of the immigrants' own social centers.

PUBLICATIONS OF THE STATE DEPARTMENT.

I. COURSES OF STUDY.

A. Syllabus for three years' work.—The State department of education offers a course of study to cover three years' work with the adult immigrant. This course is set forth in Americanization Letters 4A, 4B, and 4C.

B. Citizenship lessons for teachers.—The department furnishes teachers of citizenship classes with a course of 30 lessons. The material in this course is radically different from that contained in the old-time naturalization course. It subordinates a study of the machinery of government and emphasizes an intelligent understanding of the principles and ideals of our American democracy.

C. Other material for teachers.—(1) Americanization Letter No. 2. Fifteen points for workers in Americanization.

(2) Americanization Letter No. 3. A statistical summary. Motion pictures. Classes in naturalization and citizenship.

(3) Americanization Letter No. 5. Proceedings of the Plymouth Conference.

II. MATERIAL FOR STUDENTS.

Lesson leaflets.

Three sets of lessons for students:

- A. Introductory set for first year or beginners' classes.
 - B. Industrial Series
 - C. Women's Series
- } for pupils of more advanced grade.

Each set contains 50 or 60 lessons. Sets for each member of the class may be obtained for any or all classes operating under public-school authority.*

* A very complete story of Americanization in Massachusetts is set forth in these bulletins: (1) Adult Immigrant Education in Massachusetts, 1920-21; (2) The Massachusetts Problem of Immigrant Education, 1921-22 (both issued by the department of education, statehouse, Boston).

APPENDIX.

A. THE PLYMOUTH AGREEMENT.

In September, 1920, representations of the Associated Industries of Massachusetts and of the public-school authorities gathered together at Plymouth, adopted the following concrete plan for organizing immigrant education in the industries:

(1) The schools:

- (a) Accept provisions of chapter 295, General Acts of 1919.
- (b) appropriate enough money to get the work well done.
- (c) Provide for classes in industries whenever organized.
- (d) Provide a director of immigrant education.
- (e) Train and supervise teachers.
- (f) Provide suitable text material, including motion pictures.
- (g) Organize courses of study.

(2) The industries:

- (a) Centralize responsibility in a plant director or committee or other effective agency.
- (b) Conduct preliminary study to learn the extent and nature of the problem.
- (c) Recruit classes.
- (d) Provide satisfactory school accommodations.
- (e) Establish an efficient follow up.
- (f) Provide incentives.
- (g) Collaborate in training teachers and in providing special text material.

B. THE AMERICANIZATION LAW—MASSACHUSETTS.

General Laws, Chapter 69, Sections 9 and 10.

SECTION 9. The department, with the cooperation of any town applying therefor, may provide for such instruction in the use of English for adults unable to speak, read, or write the same, and in the fundamental principles of government and other subjects adapted to fit for American citizenship, as shall jointly be approved by the local school committee and the department. Schools and classes established therefor may be held in public-school buildings, in industrial establishments, or in such other places as may be approved in like manner. Teachers and supervisors employed therein by a town shall be chosen and their compensation fixed by the school committee, subject to the approval of the department.

SEC. 10. At the expiration of each school year, and on approval by the department, the Commonwealth shall pay to every town providing such instruction in conjunction with the department one-half the amount expended therefor by such town for said year.

C. THE AMERICANIZATION LAW—OHIO.

(House Bill No. 44.)

AN ACT To provide for the development of Americanization work and to encourage the patriotic education and assimilation of foreign-born residents, and for such purposes enacting section 7761-2 of the General Code.

Be it enacted by the General Assembly of the State of Ohio:

SECTION 1. The department of public instruction shall cease to be visited and inspected all schools engaged in adult immigrant education and assist local boards of education in localities where there is need for the organization of classes for such adult immigrant education, to the end that they may be established and supported. It shall formulate and promote programs for Americanization and patriotic education, cooperate with the agencies of the Federal Government in the promotion thereof, aid in the correlation of aims and work carried on by public agencies and private individuals and organizations, and study plans and methods which may be proposed or are in use in such work. Such department shall employ such methods, subject to existing laws, as will tend to bring into sympathetic and mutually helpful relations the State and its residents of foreign origin, to protect immigrants from exploitation and abuse, to stimulate their acquisition and mastery of the English language, to develop their understanding of American Government, institutions, and ideals, and, in general, to promote their assimilation and naturalization. Such department may for such purposes cooperate with other offices, boards, bureaus, commissions, and departments of the State, and with all public agencies, Federal, State, municipal, and school.

Sec. 2. A supervisor of Americanization work in the department of public instruction shall be appointed by the governor, who shall discharge the duties and exercise the powers imposed upon and vested in such departments by this act. The supervisor shall select an advisory committee to counsel with him in carrying out the provisions of this act. The members of such advisory committee shall receive no compensation, but shall be paid their actual and necessary traveling expenses incurred in connection with their service as such members. The supervisor shall have power to determine the number of assistants and other employees necessary to carry on the work provided for in this act, all of whom shall be in the unclassified service of the civil service of the State. The compensation of the supervisor of Americanization work shall be fixed biennially by the general assembly and his term of office shall be for two years, commencing on the second Monday of July.

Sec. 3. Section 7761 of the General Code is hereby further supplemented by the enactment of section 7761-2 of the General Code, as follows:

Sec. 7761-2. On the application of not less than 15 adult persons born outside the territorial limits of the United States of America, including Alaska and the Hawaiian Islands, resident in the district, the board of education of such school district may establish and conduct an Americanization school open to all persons 21 years of age and over, of such foreign birth, resident of the district or of an adjoining district. The board of education of such school district may or may not charge such pupils a fee as in its discretion it may determine. The curriculum for such school shall be such as may be prescribed by the supervisor of Americanization. Such school may be conducted in any school building owned or controlled by such board of education, or in any room or quarters rented for such purpose by the board of education, or the use of which is secured rent free by such board of education. Such room or quarters may be located outside the boundaries of the district. The board of education

of any other school district which does not maintain an Americanization school the residents of which are entitled to attend the Americanization school provided for in this section shall pay tuition for such persons, subject to all the provisions of sections 7735 and 7736 of the General Code, excepting that the amount of such tuition shall be ascertained and computed in accordance with the expense of conducting such Americanization school only.

Approved April 25, 1921.

D. THE CALIFORNIA STATUTE (1913).

The governor of the State shall appoint five suitable persons to act as commissioners of immigration and housing.

Said commissioners shall serve without compensation, but shall be entitled to receive from the State their actual necessary expenses while traveling on the business of the commission, either within or without the State of California.

The commission on immigration and housing shall have the power to make full inquiry, examination, and investigation into the condition, welfare, and industrial opportunities of all immigrants arriving and being within the State.

The commission shall also have the power to collect information with respect to the need and demand for labor by the several agricultural, industrial, and other productive activities, including public works, within the State.

To cooperate with the State employment bureaus, municipal employment bureaus, and with private employment agencies within the State, and also with the employment and immigration bureaus conducted under the authority of the Federal Government or by the government of any other State, and with public and philanthropic agencies designed to aid in the distribution and employment of immigrants; and to collect and publish, in English or foreign languages, for distribution among immigrants in, or embarked for, California such information as is deemed essential to their protection, distribution, education, and welfare.

The commission shall cooperate with the proper authorities and organizations, Federal, State, county, municipal, and private, with the object in view of bringing to the immigrant the best opportunities for acquiring education and citizenship.

The commission shall further cooperate with the superintendent of public instruction and with the several boards of education in the State to ascertain the necessity for and the extent to which instruction should be imparted to immigrants within the State and to devise methods for the proper instruction of adult and minor aliens in the English language and other subjects; and in respect to the duties and rights of citizenship and the fundamental principles of the American system of government; and shall cooperate with the proper authorities and with private agencies to put into operation practical devices for training for citizenship and for encouraging naturalization.

The commission of immigration and housing may inspect all labor camps within the State, and may inspect all employment and contract agencies dealing with immigrants.

It shall further investigate conditions prevailing at the various places where immigrants are landed within the State, and at the several docks, ferries, railway stations, and on trains and boats therein, and shall investigate any and all complaints with respect to frauds, extortion, incompetency, and improper practices by notaries public and other public officials.

The commission shall investigate and study the general economic, housing, and social conditions of immigrants within the State.

The sum of \$50,000 is hereby appropriated, out of any moneys in the State treasury not otherwise appropriated, for the purpose of carrying out the provisions of this act; and the State controller is hereby authorized and directed to draw warrants upon such sum, from time to time, upon the requisition of said commission, approved by the board of control; and the State treasurer is hereby authorized and directed to pay such warrants.

This legislation remained in effect from 1913 to 1921, when the division was incorporated in the department of labor and industrial relations.

E. A FEW SIGNIFICANT STATISTICS.

Foreign-born population unable to speak English in the 10 States having the largest number.

1. New York.....	290,000	6. Ohio.....	81,200
2. Texas.....	172,000	7. New Jersey.....	73,400
3. Pennsylvania.....	162,300	8. California.....	69,600
4. Illinois.....	122,000	9. Michigan.....	68,100
5. Massachusetts.....	96,400	10. Wisconsin.....	44,500

List of States with percentage and number of foreign born unable to speak English.

	Per cent.	Number.
1. Arizona.....	51.9	36,350
2. Texas.....	51.7	172,000
3. New Mexico.....	49.4	13,200
4. Florida.....	18.8	8,000
5. West Virginia.....	18.3	11,200
6. Delaware.....	14.0	2,800
7. Oklahoma.....	13.7	5,400
8. New Hampshire.....	12.7	11,400
9. Rhode Island.....	12.6	21,600
10. Ohio.....	12.1	81,200
11. Pennsylvania.....	11.8	162,300
12. Kansas.....	11.1	12,000
13. New York.....	10.5	290,000
14. California.....	10.5	69,600
15. Nevada.....	10.3	1,600
16. Connecticut.....	10.2	38,000
17. Illinois.....	10.2	122,000
18. New Jersey.....	10.1	73,400
19. Maine.....	9.9	10,400
20. Wisconsin.....	9.7	44,500
21. Michigan.....	9.5	68,100
22. Colorado.....	9.3	10,700
23. Massachusetts.....	9.1	96,400
24. Indiana.....	8.9	13,200
25. Louisiana.....	8.3	8,700

CHAPTER XXV.

RECENT DEVELOPMENT OF PARENT-TEACHER ASSOCIATIONS.

By ELLEN C. LOMBARD,
Director of Home Education, Bureau of Education.

CONTENTS.—Introductory—History, growth, and development—National Congress of Mothers and Parent-Teacher Associations—Table showing numerical strength and dates of organizations—States not affiliated with national organization—Aims and purposes—Organization—Courses in parent-teacher associations in institutions—Activities of organizations for 1920-1922—Publications and reference material.

INTRODUCTORY.

During the past two years parent-teacher associations have developed in numerical strength and effectiveness in the United States. Their expansion during this period has been notable in the history of the movement to bring home and school into cooperative relationship.

Responsibility for the early training of all boys and girls rests manifestly with parents and teachers whose task it is to prepare them, generation after generation, for the life they must lead in the world; life that is teeming with emergencies and complexities incident to changing economic and industrial conditions; life that is complicated with diverse elements of population.

The task is so important that it has become increasingly a matter of concern and discussion in educational, philanthropic, religious, and political organizations. Parent-teacher organizations, because of their constituent members, are charged more than all others with the responsibility for the fulfillment of the task.

Parents and teachers are interpreters of the environment of the children. They help the children to understand relationships, to find themselves, and to adapt themselves to their environment. They work, one in the home, the other in the school, and both in the community for the accomplishment of their aim. Teachers have their technical training and their experience to offer to the parents for their enrichment, and parents have their more intimate experience with their children and their sympathetic cooperation to offer to teachers.

The ultimate result of the cooperation indicated may be successful when these forces work together with a common aim. United into a partnership as an organized parent-teacher association; the partnership becomes an important asset not only to the home and the school,

but also to the community, the State, and the Nation. The parent-teacher association movement in the United States during the period 1920-1922 has developed from a membership of 189,000 to over a half million members.

HISTORY, GROWTH, AND DEVELOPMENT.

Mothers' meetings inaugurated in 1855, in connection with the kindergarten movement in the United States, seem to have been the precursors of the parent-teacher associations. A mothers' conference was called by a kindergarten training teacher in Chicago in 1894. Three years later a National Congress of Mothers was called in Washington, D. C., by a group of mothers, in which the interests of all little children, the home, and the community were discussed. A permanent organization of mothers was formed at that time, and plans for the study of problems relating to child welfare were developed. In 1900, a formal charter was granted this organization in the District of Columbia.

Mothers and teachers discovered that they could accomplish more if united into a cooperative organization than was possible when each worked separately. Parent-teacher associations came into existence in response to the expressed need. Other organizations with various names but similar purpose came into existence also and united in this national organization. Among them were the parents' leagues, home and school associations, mothers' leagues, mothers' unions, preschool circles, reading circles, etc. In 1908, the National Congress of Mothers changed its name to include parent-teacher associations, and in 1915 a new charter was secured.

The movement has developed until the parent-teacher association has become the dominant national activity of parents and teachers. Associations have been organized in every State, in Alaska, and Hawaii.

State organizations have been effected in 40 States in affiliation with the national organization.

NATIONAL CONGRESS OF MOTHERS AND PARENT-TEACHER ASSOCIATIONS.

The national organization, called the National Congress of Mothers and Parent-Teacher Associations, is made up of State branches, which are in turn made up of local organizations. The officers are elected as provided by the constitution or by-laws. An annual convention is held at a time and place decided upon each year by a board of managers.

In the 40 organized States the organizations are uniform in all important features. Variations occur to conform to local conditions. A complete organization of parent-teacher associations in a State may include local associations affiliated with the State, city,

and county councils, and a State organization affiliated with the national organization. Membership consists of active, associate, sustaining, and life members and benefactors. Active members in the national organization must be members of a local organization whose dues are paid according to provisions of the organization.

A large proportion of parent-teacher associations are affiliated with the National Congress of Mothers and Parent-Teacher Associations. In some States there are a few associations affiliated with the General Federation of Women's Clubs and with State teachers' associations.

The national organization has grouped the United States into 14 regions for the purpose of closer cooperation and conference. These regional groups represent in a delegate body all the States in the respective regions, as follows: Region No. 1, Maine, New Hampshire, Vermont, Massachusetts, Rhode Island; region No. 2, New York, New Jersey, Connecticut; region No. 3, Pennsylvania and Delaware; region No. 4, District of Columbia, Maryland, Virginia, West Virginia; region No. 5, North Carolina, South Carolina, Florida, Georgia, Tennessee; region No. 6, Alabama, Mississippi, Louisiana; region No. 7, Kentucky, Ohio, Indiana; region No. 8, Illinois, Wisconsin, Michigan; region No. 9, Missouri, Kansas, Nebraska, Iowa; region No. 10, Minnesota, North Dakota, South Dakota, Montana; region No. 11, Texas, Oklahoma; region No. 12, Utah, Colorado, Wyoming, New Mexico; region No. 13, California, Arizona, Nevada; region No. 14, Washington, Oregon, Idaho. They finance themselves and work under an elected director.

Active work in the national organization is carried on through departments and standing committees. During the past two years a complete reorganization of departments and standing committees has been effected, and there are five departments under which committees work, as follows:

1. *Organization and Efficiency*.—Child Welfare or Founders' Day; Child Welfare Magazine, extension, finance, membership, press and publicity, program service and literature.
2. *Public Welfare*.—Better films, country life, immigration and American citizenship, juvenile protection, legislation.
3. *Education*.—Humane education, kindergarten extension, scholarship, school education, visual education.
4. *Home Service*.—Children's clothing, home economics, home education, Mothers' Study Circles, preschool age, recreation and social standards, thrift.
5. *Health*.—Child hygiene, monogamous marriage, physical education, racial health.

Each department is under the direction of a vice president. When a State has a membership aggregating 500 in at least 20 associations, these may be organized into a State branch and admitted to member-

ship upon payment of the required dues. Questions of membership are settled by the board of managers. In unorganized States, associations and circles may join the national association directly until State organization takes place. If rulings of National and State organizations conflict, State branches must upon notification make such changes in their regulations as will conform to the national decisions.

The national headquarters are located in Washington, D. C., and are under the direction of an executive secretary. A field secretary is also maintained.

In Alabama, Kentucky, Tennessee, Ohio, and Texas the parent-teacher organizations have had quarters in State departments of education. In some States presidents have headquarters in their homes. Massachusetts headquarters are located in Boston, where a secretary is in charge. In New York the headquarters are located at Lockport.

Alabama, Arizona, Delaware, Florida, Kentucky, Maine, Michigan, Minnesota, Missouri, New Jersey, North Carolina, Ohio, Oklahoma, and Virginia have developed under the direction of organizers or field secretaries.

In Colorado the State department of education furnishes an executive secretary for parent-teacher work.

Numerical strength of State organizations and dates of organization.

States.	Date of organization.	Membership.	States.	Date of organization.	Membership.
California.....	1902	53,047	Wisconsin.....	1910	5,384
Missouri.....	1912	39,157	Connecticut.....	1900	5,015
Illinois.....	1900	27,023	Oregon.....	1904	4,052
Washington.....	1906	22,910	Rhode Island.....	1909	4,013
Ohio.....	1910	22,343	Alabama.....	1908	3,675
New Jersey.....	1900	21,865	Mississippi.....	1908	3,195
Texas.....	1909	21,156	New Hampshire.....	1915*	2,197
Michigan.....	1908	18,485	Maryland.....	1915	2,172
Iowa.....	1900	16,640	Idaho.....	1905	2,159
Colorado.....	1907	15,405	Arizona.....	1903	2,142
New York.....	1897	13,704	District of Columbia.....	1905	1,785
Pennsylvania.....	1899	12,890	North Dakota.....	1921	1,472
Kentucky.....	1918	12,255	Virginia.....	1921	1,311
Indiana.....	1912	11,238	Vermont.....	1912	1,206
Massachusetts.....	1910	9,733	Maine.....	1915	1,083
Kansas.....	1914	8,608	South Dakota.....	1915	996
Georgia.....	1906	8,340	Nebraska.....	1922	914
North Carolina.....	1919	7,631	New Mexico.....	1915	754
Tennessee.....	1913	5,897	Montana.....	1915	505
Delaware.....	1908	5,414	Florida.....	1921	359

Delaware organizations of parents and teachers have grown from 6 organizations in 1920 to 250 in 1922.

UNORGANIZED STATES NOT AFFILIATED WITH NATIONAL ORGANIZATION.

The foregoing table does not include all the membership in parent-teacher associations in the United States. It is estimated that the complete membership would total over a half million members. In some organized States a few organizations are affiliated actively with the Federation of Women's Clubs and State educa-

tional associations. There are large groups of organizations of parents and teachers in Arkansas, Louisiana, Minnesota with 1,558 members, Nevada, Oklahoma with 580 members, South Carolina, Utah, West Virginia, and Wyoming, and a few in Alaska and Hawaii.

Arkansas has school-improvement associations in most of its cities and towns. During the past two or three years many country schools have organized associations in this State. The work is fully recognized by the State department of education, which furnishes programs for monthly meetings. There are about 600 of these organizations actively at work in the State. Their chief value is in bringing patrons and teachers together.

Parent-teacher associations are organized in the larger cities of Louisiana, such as New Orleans, Shreveport, Baton Rouge, Crowley, etc. They cooperate with the school authorities in local educational activities, although no legal recognition is given them by State educational authorities.

There are in Nevada a number of parent-teacher associations. It is estimated by the State department that one-half of the larger towns have organized them. No official recognition is given them by the State department of education, but the department urges communities to organize them.

In South Carolina community work is carried on to a great extent by the school-improvement associations. They are local organizations, reported to be located in about 1,200 communities. The parent-teacher association as such works in a few cities. The State superintendent of education reports that their activities are fine and results are satisfactory.

In West Virginia there are 89 local associations, located in 33 different counties. There is as yet no State organization. The division of rural education of the State department of education reports that these associations contribute to the needs of the schools. They buy equipment where boards of education are not ready to do so, aid in establishing hot lunches, try to make the school an integral part of the community life, and cooperate with the teacher in many ways to bring about successful school activities. The State department of public instruction is anticipating the formation of a State branch, so that these organizations will contribute more to the school life of the State. The department is doing what it can to encourage new organizations.

A large group of parent-teacher associations in Utah are affiliated with the Utah State Teachers' Association. Meetings are held simultaneously with the annual meeting of the State teachers' association. These parent-teacher associations serve the community and aid the schools in solving their problems.

While there are parent-teacher associations doing excellent work in Virginia, there are also community leagues organized in connection with the State department of education, under a Cooperative Education Association. These leagues meet to discuss their various educational and civic problems. In 1921 there were reported to be 1,555 leagues, with a membership of 38,419. These leagues are reported to have raised \$186,340, for their work of improving the schools.

AIMS AND PURPOSES.

The definite aims of parent-teacher associations are as follows: To surround children and youth with an environment adapted to their growing needs; to bring together parents and teachers and others for the study of child nature and all questions relating to the care and proper guidance of children in the home and elsewhere; to cooperate with educational institutions intelligently; to work for the creation of kindergartens in schools where they are needed; to work for public welfare, with regard to health, morals, recreational facilities, children's courts, mothers' pensions, etc. These activities are carried on through committees appointed for this work.

The parent-teacher organization is not formed to interfere with the administration of the school in its discipline or its curriculum. It should not purchase, except in an emergency, equipment that the school board should furnish from the public funds. It should be warned constantly against permitting the organization to be used to further politics, but it may join with other clubs in endorsing certain principles in matters that affect children which are to be embodied into law. Its name should not be used to further the interest of any commercial enterprise.

ORGANIZATION.

Parent-teacher associations may be organized in each grade of schools, or may be organized for entire schools and in high schools. These organizations may vary in name, but not essentially in purpose. They may be called mothers' circles, home and school associations, parents' leagues, preschool circles, parents' councils, parent-teacher associations, etc.

Local and State organizations have latitude in respect to dues. When the obligations of local and State organizations to the national organization have been discharged, they may decide upon the amount of dues for their own work.

COURSES IN PARENT-TEACHER ASSOCIATIONS.

Teachers College of Columbia University, New York City, announced for its 1922 summer school a three weeks' course in education (S-212-C) covering the organization and conduct of parent-

teacher associations. This course, given in cooperation with National Congress of Mothers and Parent-Teacher Associations, will consider the need for parent-teacher associations and how to organize them; the problems, opportunities, and achievements of associations in all parts of the country; how the National and State organizations may help the local associations. An exhibit of the many varieties of free published helps of the National and State associations will be open to supervisors, teachers, and parents. The program of this course includes three lectures to introduce the subject. Work and discussions are to be carried on under the following topics:

1. Principles underlying education and the home. Failures of each.
2. Duty of the schools to the homes.
3. Inspiration due the schools from the homes.
4. Arguments for parent-teacher associations.
5. Legitimate fields for parent-teacher association activity.
6. Fields which parent-teacher associations should not enter.
7. Division of class into sections to prepare programs for year's work for local parent-teacher associations.
8. Organization of local associations, women representing the mothers, and men of the class representing teachers.
9. State organizations—conditions for organization, work, etc.
10. National organization—scope, accomplishments, present status.

Some of the reference books to be used in this course are: *Parent and Child*, by Henry F. Cope, New York, Doran Co.; *New Schools for Old*, Evelyn Dewey, New York, E. P. Dutton; *Child and His School*, by Gertrude Hartman, New York, E. P. Dutton; *Outlines of Child Study*, by McKeever, New York, Macmillan Co.; *Practical Conduct of Play*, by Curtis, New York, Macmillan Co.

Superintendents of schools of Hancock County and Vermillion County, Ill., arranged for parent-teacher association instruction during the past year.

The State director of summer schools of New Jersey conducted in 1921 a parent-teacher day or school at each of the four regular summer schools for teachers during July and August. With the exception of the two-day parents' school, held in cooperation with the State university and Rutgers College, all were one-day sessions. These sessions were arranged in cooperation with the New Jersey State Parent-Teacher Association. In these classes it was aimed to give young teachers a clear understanding of the aims, ideals, and activities of parent-teacher associations, and to give parents a better idea of the present-day school, so that better cooperation might result.

The morning sessions were spent in observation in classrooms, parents passing from grade to grade, observing the modern methods in teaching. Afternoon sessions were given to addresses by parent-teacher association officials on the aims and purposes of the parent-

teacher associations, the value of religious education in the home, and what State and National organizations can do for local organizations, etc.

ACTIVITIES OF ORGANIZATIONS FOR 1920-1922.

A study of the reports of activities for 1920-1922 in parent-teacher associations in many States reveals a diversity of activities, but one general aim, e. g., to surround children with conditions favorable to their growth. In California, the State having largest membership, the associations raised over \$150,000, which was used to better teaching facilities, to furnish more school equipment, hot lunches at minimum cost, milk for undernourished children, scholarships for needy students, etc. Over \$30,000 was spent for playground apparatus and musical instruments. California reports that more and more the men in school districts are identifying themselves with parent-teacher associations. Fathers and teachers represent 20 per cent of the attendance. Work in rural schools has been emphasized in Colorado. To become a standard rural school, according to the rulings of the State department of public instruction, a school must have a parent-teacher association. When schools reach the standard a bronze plate is nailed on the schoolhouse. The increasing interest of men in these organizations is shown in the reports of some States.

Delaware reports 5 per cent of its rural population belonging to associations, and men constitute one-half of the membership. A report of the activities of parent-teacher associations in Delaware shows that 8 organizations paid for school repairs; in 30 schools furniture was bought by them; school supplies were purchased in 18 schools by them; victrolas or other musical instruments were purchased in 34 schools; in 230 organizations school health or recreation programs were promoted; 42 organizations served hot lunches; and 45 furnished the books for school libraries. Other activities were listed as child-welfare work, tree planting, better attendance, sentiment for new building, toilets scrubbed weekly and fumigated, etc.

One local organization reported that the greatest achievement was in making the residents of the community conscious of their part in making the school.

Membership and attendance of fathers in New Jersey are increasing. In one organization fathers represent 40 per cent of the membership.

In Massachusetts 25 per cent of the presidents of local organizations have been men.

During 1920-1922 parent-teacher associations in high schools have increased in number throughout the United States, according to

reports. Dress, chaperonage, wholesome recreation, and better movie films are among the subjects upon which activities are based in these associations. Wisconsin has associations in 21 high schools.

Dads' Night programs were reported in Idaho and Washington, and fathers' meetings were held in North Carolina and Illinois. Father and Son and Mother and Daughter Dinners were instituted in North Dakota.

Two important activities which are the outgrowth of parent-teacher associations are the preschool study circles and reading circles. In 1921 reading circles were active in five cities in California. At North Glendale one of these reading circles has a membership of over 200 women who have used the home-reading courses of the United States Bureau of Education. Other circles are at Hermosa Beach, Garvanza, Puente, and Pasadena.

The preschool circles found in Washington State and other States consist of mothers of little children under school age. Programs for these circles include the subjects of child care and training, proper diet for the young child, proper clothing, advice to expectant mothers.

The activities of the Cooperative Education Association of Virginia are, as indicated by the name, largely concerned with raising money in order to improve the school plant. They finance school lunches, improve the social and recreational life of the community, and cooperate with the school board in its efforts. Many libraries have been installed as a result of the efforts of these organizations.

The resolutions of National and State organizations at their annual meetings indicate the trend of thought of the entire parent-teacher group. Some typical resolutions are those from Arizona and Florida. They include the indorsement of President Harding's words of counsel to observe more strictly the laws of the land and commended his efforts to turn the thoughts of the American people in a more spiritual direction, urging upon all parents the necessity of developing a deeper spiritual life in their children in order to counteract loose moral tendencies of the present day; placing greater safeguards around our young people relative to present-day amusements along the following lines: (a) That boys and girls of tender age be not allowed to play outdoors after dark unsupervised; (b) that girls be not allowed to go unchaperoned in autos with young men; (c) that simple home parties be encouraged to take the place of the public amusements for young people; (d) that parents urge their young daughters and their sons to avoid late hours.

Many organizations work for the establishment of kindergartens in the schools, for better films, for the health of school children, for better recreational facilities, for libraries in the schools and communities, for Americanization, for thrift, in fact for the adjust-

ment of the environment to the growing needs of the children in the home, the school, and the community.

A survey of the field of literature for the use of parent-teacher associations reveals the fact that printed leaflets on organization and programs are needed.

Extension divisions of State universities in Indiana, Iowa, North Carolina, and Wisconsin have issued pamphlets of use to parent-teacher associations and furnished packet libraries and speakers for meetings.

Some State departments of education, among them Delaware and Wisconsin, have issued bulletins on the organization and conduct of parent-teacher associations.

PUBLICATIONS AND REFERENCE MATERIAL.

State and local boards of education have given space in their monthly bulletins, reports, and announcements of parent-teacher associations' work. The Detroit Educational Bulletin, vol. 6, No. 2, included nine pages devoted to parent-teacher associations. In the following list of publications an attempt has been made to include material in use in 1920-1922. It has been impossible to get complete data regarding the material issued in all States. Yearbooks or directories are issued by 14 State organizations. Twenty-two State organizations publish monthly or quarterly bulletins for distribution to their respective organizations.

The yearbook of the Delaware Parent-Teacher Association, which was prepared by the Service Citizens of Delaware, is one of the outstanding publications of its kind and contains in limited space the essential information of each parent-teacher association, white and colored, in Delaware, regarding membership, average attendance, officers, activities, and achievements. The extension division of North Carolina University has issued an excellent hand book for North Carolina organizations, containing organization and program material.

The North Carolina College for Women issues a monthly bulletin for parent-teacher associations in North Carolina.

REFERENCES.

- Report of Congress of Mothers and Parent-Teacher Associations. By Elizabeth Harrison. In National Education Association. Addresses and proceedings, 1919. p. 428-662.
- How may parent-teacher associations best cooperate with public schools? In National Education Association. Addresses and proceedings, 1921. p. 661-662.
- Parent-teacher associations. By Edith E. Hoyt. Madison, Wis., 1920. (University of Wisconsin Bulletin.)
- Parent-teacher associations. In Educational digest. Vol. 42. No. 1. Aug.-Sept., 1922.

California.

Booklet of suggested programs. Published by the California (sixth district). Free.

Suggestions included for each month.

Booklet of suggestion. Published by the California (second district) Congress of Mothers and Parent-Teacher Associations. Free.

Bulletin. Published by the California (first district) Congress of Mothers and Parent-Teacher Associations. Free.

Containing sections on thrift, social hygiene, and high school parent-teacher associations.

Duty. Circular letter no. 1. Issued by the California Congress of Mothers and Parent-Teacher Associations. Department of patriotism. Free.

Suggestions for programs on patriotism.

Home department. Prepared and issued by the California Congress of Mothers and Parent-Teacher Associations. Free.

Contains an introduction and Home reading course no. 3, U. S. Bureau of Education.

Home and school. Published by the California Congress of Mothers and Parent-Teacher Associations, 1921. Free.

A booklet for use in securing cooperation between home and school for the moral training of children; to better home conditions; to encourage parents to use preventive methods of training instead of corrective ones; to form good habits of living; and to encourage parents to use the ethical story as a means of character building.

Instructions for organizing and carrying on a parent-teacher association. Published by the California Congress of Mothers and Parent-Teacher Associations. Extension department. Free.

Parent-teacher associations in rural and village schools. By Lura Sawyer Oak. Published by the State Department of Education, Sacramento, Calif. Bulletin no. 27. Free.

Tells how to organize and contains 26 programs and 10 entertainments.

Parent-teacher bulletin. Published by the Parent-Teacher Associations, Petaluma, Calif. Free.

For use of local associations.

Programs for child study. Published by the San Diego Federation of Parent-Teacher Associations, 1921. Free.

Programs for parent-teacher association activities. Published by California (ninth district) Parent-Teacher Associations, 1921.

For use of local associations.

Suggestions. Published by the California (third district) Parent-Teacher Association.

Yearbook of the California Congress of Mothers and Parent-Teacher Associations.

Consists of outlines of department work, helps for programs, roster, etc.

Missouri.

Missouri bulletin. Published bimonthly during the school year by the Missouri Congress of Mothers and Parent-Teacher Associations.

Contains direct news and instructions from State president to circles.

Missouri program book. Published biennially, alternating with the yearbook, by the Missouri Congress of Mothers and Parent-Teacher Associations. Free.

Missouri school journal. Published by A. S. Lehr, Jefferson City, Mo.

Includes a department of parent-teacher associations.

Missouri yearbook. Published biennially by the Missouri Congress of Mothers and Parent-Teacher Associations, Springfield, Mo. Free.

Covers the work of one administration.

School and community. The official organ of the Missouri State Teachers' Association.

Two pages devoted to parent-teacher association work.

Why, when, how to organize circles for child-welfare study in home, school, and church. Published by the Missouri Congress of Mothers and Parent-Teacher Associations. Free.

An organizing booklet.

North Carolina.

North Carolina parent-teacher bulletin. Published monthly for the parent-teacher association by the extension division of the North Carolina College for Women.

The parent-teacher association. Prepared by Harold D. Meyer and published by the university extension division, University of North Carolina, Chapel Hill, N. C., 1921.

To encourage organization of parent-teacher associations and assist them in their meetings.

Delaware.

Our teacher. Program leaflet no. 5. Issued by the Delaware State Parent-Teacher Association, 1922.

Program and information about the teacher situation and what can be done about it.

Physical education. Program leaflet no. 2. Issued by the Delaware State Parent-Teacher Association, 1921.

Leaflet for the program committee.

Recreation for the community. Program leaflet no. 6. Issued by the Delaware State Parent-Teacher Association, 1922.

Yearbook. Prepared and issued by the Service Citizens of Delaware, 1922.

Contains roster of parent-teacher organizations of white and colored people with information about officers and activities.

Georgia.

Bulletin. Published monthly by the Georgia Congress of Mothers and Parent-Teacher Associations. Free to Georgia parent-teacher associations.

Directory. Published by the Georgia Congress of Mothers and Parent-Teacher Associations, 1922.

Program for local parent-teacher associations. Prepared by Mrs. T. J. Cater, chairman of education. Published by the Georgia Congress of Mothers and Parent-Teacher Associations.

What one-half of the parent-teacher associations of Georgia did during 1921-22 term. Published by the Georgia Congress of Mothers and Parent-Teacher Associations.

Why join the State and national congress? Prepared by Mrs. Bruce Carr Jones, president of the Georgia Congress of Mothers and Parent-Teacher Associations and issued by the organization.

Idaho.

Bulletin. Published monthly by the Idaho Congress of Mothers and Parent-Teacher Associations.

Yearbook. Published by the Idaho Congress of Mothers and Parent-Teacher Associations.

Contains roster, reports, and suggestions for meeting.

Illinois.

Bulletin of the Illinois Council of the Parent-Teacher Association. Published monthly by the Illinois Council of Parent-Teacher Associations. Free.

To keep parent-teacher associations informed regarding their activities.

Yearbook. Published by the Illinois Council of the Parent-Teacher Association.

Indiana.

Bulletin. Issued monthly by the Indiana Parent-Teacher Association.

To afford direct contact between State and local organizations.

Constitution and by-laws. Prepared and published by the Indiana Parent-Teacher Association, Indiana University, Bloomington, Ind., 1921.

For use of all Indiana parent-teacher associations.

General programs for monthly meetings. Free. Prepared and issued by the extension division, Indiana University, Bloomington, Ind., 1921.

Contains programs for a year on health of school children, etc.

Manual of organization of Indiana parent-teacher associations. Prepared by Mrs. Hecce Orme. 1921. Issued by the Indiana Parent-Teacher Association, Indiana University, Bloomington. Free.

A guide to new organizations.

Parent-teacher associations. Prepared by Edna Hatfield Edmondson, 1920. Issued by the extension division, Indiana University, Bloomington, Ind.

Contains material regarding history, function, field of activities, relation to other social organizations, and topics for programs.

Report of the parent-teacher associations of Fort Wayne. Published by the publicity department of the Fort Wayne Council of Parent-Teacher Associations, 1921.

Contains report of work of one council in Indiana.

Suggested program of study and work for parent-teacher associations. Prepared by Edna Hatfield Edmondson, 1921. Issued by the extension division, Indiana University, Bloomington, Ind.

Suggests sources of study on various subjects.

Iowa.

Bulletin. Issued monthly by the Iowa Congress of Mothers and Parent-Teacher Associations.

For use as a means of communication between the State and local organizations and contains material for programs.

Constitution. Prepared by State chairman of Iowa Congress of Mothers and Parent-Teacher Associations, 1921.

Suggestions for parent-teacher associations.

Parent and teacher. Extension bulletin no. 76, 1921. Prepared by Dr. Forest C. Ensign. Issued by the extension division, University of Iowa, Iowa City, Iowa.

Contains history of movement, organization of mothers' circles, rural parent-teacher associations, parent-teacher associations in high schools, programs, etc.

Massachusetts.

Bulletin. Published monthly by the Massachusetts Parent-Teacher Association.

Directory. Published by the Massachusetts Parent-Teacher Association, 1922.

Leaflet on what the State association does and what the local association does. Published by the Massachusetts Parent-Teacher Association.

Parent, child, and school. Prepared by the division of university extension of the State Department of Education, Boston, in cooperation with the Massachusetts Parent-Teacher Association.

A course for correspondence instruction for parents (in preparation). This course will contain books stressing home influences, the child's mental, moral, and physical welfare during the preschool years.

Speakers' list. Published by the Massachusetts Parent-Teacher Association, 1922.

Yearbook. Published annually by the Massachusetts Parent-Teacher Association.

Texas.

Handbook of information on parent-teacher associations of mothers' clubs. Published by the Texas Congress of Mothers and Parent-Teacher Associations. Free. 1922.

Its object is to give parent-teacher associations and mothers' clubs information and suggestions for organization, conduct, and work.

Official roster, 1921. Published by the Texas Congress of Mothers and Parent-Teacher Associations. Free.

Partial summary of the work of the Texas Congress of Mothers and Parent-Teacher Associations. Free.

Contains brief statements of achievements, activities, and further campaigns and movements.

Suggestive programs for parent-teacher associations. Published by the Texas Congress of Mothers and Parent-Teacher Associations, 1921. Free.

Contains suggestions for program committees regarding the use of the material, attendance, etc., and excellent material for programs.

PUBLICATIONS OF THE NATIONAL CONGRESS OF MOTHERS AND PARENT-TEACHER ASSOCIATIONS.

Aims, materials, practical accomplishments. Issued in Washington, D. C.

Child Welfare Magazine. Published in Philadelphia, Pa.

Constitution for mothers' study circles. Prepared by Mrs. Elwell Hoyt.

The elusive vitamin. Prepared by Mrs. Allan P. Stevens.

Five plans to increase membership. Prepared by Mrs. C. C. Noble.

Handbook of information about parent-teacher associations and mothers' circles.

Hints to ambitious parent-teacher associations.

Importance of publicity. Prepared by Mrs. W. H. Sawyer.

Joining the National Congress of Mothers and Parent-Teacher Associations.

Prepared by Mrs. Florence V. Watkins.

List of loan papers on child welfare for program use.

Managing the income. Prepared by Mrs. Allan P. Stevens.

Mothers' study circles. (Preschool Age.) Prepared by Mrs. Elwell Hoyt.

Parents' associations or departments in church or Sunday school.

Program of work for local parent-teacher associations. Prepared by Prof. M. V. O'Shea.

Reasons for parent-teacher associations. Prepared by Mrs. Florence V. Watkins.

What prominent educators think of the movement.

GOVERNMENT PUBLICATIONS FOR PARENT-TEACHER ASSOCIATIONS.

Child health program for parent-teacher associations and women's clubs.

Health education circular no. 5. Published by the Department of the Interior, Bureau of Navigation, 1920.

Child welfare programs, 1920. (Children's follow-up series no. 7.) Prepared and issued by the U. S. Children's Bureau, Department of Labor.

Twenty good books for parents. Home reading course no. 21. Issued by the Department of the Interior, Bureau of Education, Washington, D. C.

CHAPTER XXVI.

EDUCATIONAL WORK OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION.

By WILLIAM F. HIRSCH,
Executive Secretary of the United Y. M. C. A. Schools.

CONTENTS.—Introduction—The educational council—The student body—The field and objectives of the work—Standard courses of study—Publication of textbooks—Instruction material—Examinations and credits—Types of association schools: Schools of commerce; law schools; engineering schools; automotive and machine-shop schools; college preparatory schools; miscellaneous schools—Building real educational institutions: Northeastern University; Detroit Institute of Technology; Cleveland School of Technology; Youngstown Institute of Technology; the 26 largest schools—Correspondence instruction—Educational assistance for ex-service men; scholarship awards; vocational guidance—Americanization work—Conclusion.

The Young Men's Christian Association was one of the pioneers in the development of evening education for employed men and boys. The beginnings of this work go back more than half a century, the first work of this kind being reported in 1866, when 4 associations had 60 students in evening class work. The growth during the decade from 1870 to 1880 was comparatively slow, in the latter year 61 associations reporting 167 classes with approximately 4,000 students.

During the next decade, 1880 to 1890, evening educational classes became a generally recognized part of the program of activities of the Young Men's Christian Associations, and in 1889 at the International Convention 201 associations reported evening class work, with a total number of 14,000 students enrolled.

In 1892 the educational department of the International Committee was organized, with Mr. George B. Hodge as its executive secretary. Under the stimulus of his resourceful spirit and thorough pedagogical methods, the educational work of the associations increased in extent and improved in quality, so that by 1900 the number of associations doing educational work had increased to 288, and the total number of different students to 24,395.

During this last decade of the nineteenth century broad foundations were laid for the future development of the associations' educational work. In addition to the classes in elementary school and high school subjects, which were the earliest subjects taught, there were developed elementary courses in commercial subjects. There also came, beginning about 1895, trade and technical work and some experimentation in manual training, which paved the way for its later introduction into the public schools in many cities.

This period also saw the beginning of the educational secretaryship as a profession and the organization of the educational work of the association into fairly well-supervised schools.

During the first 15 years of the new century there came a period of rapid expansion, both in the number of students and in the range of subjects taught. Special emphasis during this period was laid on the development of vocational training, resulting in the organization of classes in such subjects as automobile operation and repair, accountancy, commercial art, salesmanship, advertising, insurance, real estate, public speaking, machine design, textile work, plumbing, industrial management, plan reading, wireless telegraphy, first aid, fruit culture, poultry husbandry, etc. By 1915 the number of associations carrying on educational work had increased to 468, and the total number of different students was 83,771.

The war period, with its emphasis on service to men in the Army and Navy, witnessed a decline in the educational work of the local associations, a great many dropping this work altogether, so that the total number of associations reporting educational work for the school year 1918-19 was only 253. The number of students, however, remained fairly constant, the total for this year being 86,734. This growth in the number of students, however, was due almost entirely to the fact that a few of the associations in larger cities, such as Boston, Philadelphia, Detroit, and Chicago, had greatly increased their student bodies.

THE EDUCATIONAL COUNCIL.

During the years 1917 and 1918 there was a growing dissatisfaction among association educational workers with the quality of work being done, which resulted in the calling together in the early part of 1919 of a group of 146 delegates, representing 54 associations, for the purpose of considering the principles and methods upon which a better type of educational work might be based. This "Meeting of 146" marks the beginning of a new epoch of association educational work under which in the past three years there has come a remarkable improvement in the quality of work done by the associations and a considerable growth in numbers. These advances have been the result, largely, of the steps taken at the Detroit meeting to provide for the standardization of courses of study and curricula and for the production of text and instruction material by the use of which it is possible for each individual association to carry on its work in accordance with the approved practices of the most advanced associations.

The Detroit meeting provided for the creation of an educational council, composed of two delegates from each of the local associations, maintaining educational work. This council selects from its

number a board of governors of 15 men as a responsible executive body for carrying out the policies and purposes of the council. Under this board of governors the executive staff has been built up at the New York headquarters, and working in cooperation with the representatives of the local associations has developed and put into practice the program of standardization of courses, the creation of promotion and text material, and has carried on a large amount of visitation work in assisting local associations in the promotion and improvement of their educational work.

THE STUDENT BODY.

Under the stimulus of the national purpose and program thus developed by the educational council, the association schools have made rapid progress during the past three years. Their number has increased from 253 to 365, or 44 per cent; the number of different students enrolled has increased from 86,734 to an average for the biennium covered by this survey of 120,205, or 38 per cent; and the number of paid teachers from 2,256 to 2,960, or 31 per cent.

The student body in the association schools ranges in age from 15 years to well past 50. The great body of students, however, are in the age group of 21 to 29, with the average age of the total student body for the last school year at approximately 25 years. The following analysis of the student body in one of the middle western schools having nearly 5,000 students in the school year 1921-22 is sufficiently typical of the association schools. The ages of the students varied from 15 to 40 and over. By percentages the ages of the students were:

	Per cent.		Per cent.
15 to 17 years.....	10.8	30 to 32 years.....	7.7
18 to 20 years.....	17.0	33 to 35 years.....	5.0
21 to 23 years.....	18.6	36 to 39 years.....	2.5
24 to 26 years.....	22.3	40 or over.....	4.0
27 to 29 years.....	14.1		

The maximum previous education of students before entering was as follows:

	Per cent.	
6 years or less.....	9.9	Students in the automotive, trade, and junior commercial subjects are largely found in this group.
7 years.....	5.2	
8 years.....	22.7	
9 years.....	25.8	The students for the school of commerce, law, and professional subjects are found mainly in this group.
10 years.....	9.0	
11 years.....	3.8	
12 years.....	10.8	
1 or more years at college.....	12.8	

¹Practically 90 per cent of the students between 15 and 18 years of age are enrolled in the day schools for boys.

The general occupational classification of the students was:

	Per cent.
Producing and manufacturing-----	37.0
Merchandising and distributing-----	19.5
Managing, clerical, recording-----	41.0
Professional and serving-----	2.5

This indicates that the type of men who are appealed to by the association's educational program are, in the main, men who have had a number of years of experience in earning a living and have learned the value of a more thorough educational preparation for their vocational careers. More than 90 per cent of the students in these schools are self-supporting young men who have entered the association schools with a well-defined understanding of what they desire to accomplish. This makes for a high type of school work and reduces the problem of discipline to a minimum.

An analysis of the student enrollment in subjects for practically the entire student body in 1921-22 shows the following groupings:

Commercial subjects-----	56,524, or 48.7 per cent.
Industrial subjects-----	19,690, or 17.0 per cent.
Professional subjects-----	7,732, or 6.7 per cent.
Academic subjects-----	16,393, or 14.1 per cent.
Socio-civic subjects-----	15,701, or 13.5 per cent.
Grand total-----	116,040

The students in the association schools pay nearly the full expense of maintaining the schools. For the school years 1920 to 1922 the total expenses were \$7,171,446, toward which the students paid \$6,714,987, or 93.6 per cent.

THE FIELD AND OBJECTIVES OF THE WORK.

During the past three years the Y. M. C. A. schools, through the standardization program, have been giving careful attention to discovering their most likely fields of educational service and defining more clearly their major educational objectives in each of these fields of service.

The field.—The educational statistics from authoritative sources reveal a very large unoccupied field, especially for part-time adult education. According to the 1920 census, the number of boys from 16 to 20 years of age, inclusive, who are out of school, and therefore presumably at work, is approximately 3,500,000. The number of young men 21 to 25 years of age, deducting those known to be in colleges and professional schools and other forms of full-time educational work, adds another 4,000,000 to this potential field. The association schools appear to be enrolling students reaching well up beyond 35 years of age; so it would be fair to add to the poten-

tial field the total number of men in the United States in the ages from 26 to 35, inclusive, which would be 8,500,000, thus making the total number of males from 16 to 35 years of age not in any day school or college approximately 16,000,000. If it be assumed that only 20 per cent of this number have the ambition and energy to undertake evening school work, this would give a practical field of approximately 3,200,000 older boys and young men.

These same figures show that only 20 per cent of the boys between the ages of 17 and 20, inclusive, are enrolled in school; that only 12 per cent of the boys of the ages 19 and 20 are enrolled in school, and that only six-tenths of 1 per cent of the male adults 21 years of age and above are enrolled in the school in a given year.

Apparently the field of vocational and cultural education for younger men is far from being occupied, and the field of adult education from the standpoint of numbers is practically untouched. According to the Federal Board for Vocational Education (report for 1922) there were enrolled in federally aided evening schools during the year ending June 30, 1922, a total of 133,835 persons. The bulletin of Statistics of City School Systems, prepared by the Bureau of Education, reports that 586,843 students of both sexes were enrolled in all the public evening schools of the United States in 1920. If it were assumed that the enrollment in the semipublic and private evening schools is an equal number and that three-fourths of the students are males, this would give a total of 880,274 male students in all evening schools. The proportionate enrollment of males is doubtless nearer 50 per cent than 75 per cent.

It would therefore appear that, notwithstanding all the schools now in operation, at least 2,000,000 older boys and young men who probably have sufficient ambition and earnestness to pursue evening courses of study that would result in greater vocational efficiency and more satisfactory citizenship have yet to be aroused to their need and their opportunity.

The objectives.—The purpose of Y. M. C. A. educational work is really twofold—educational, in the usual connotation of the word, and character building. Its distinctive objective is the development of Christian ideals, attitudes, and habits in its students through its educational activities. The more strictly educational objectives vary with localities and local programs.

From the service point of view, the objective is to reveal educational needs and values and to provide for individuals and natural groups the needed types and units of educational experience under satisfactory conditions of time, place, and cost. Educational experience implies more than school training. The complete educational process involves at least three types of activities: (a) Guidance, vocational and educational; (b) training or development, i. e.,

education; (c) placement, i. e., employment. The revealing of educational needs of individuals and groups through "promotion" and registration not only requires special activities, but often this factor influences the content, organization, and teaching methods of the course or curriculum.

From the sociological viewpoint the educational objectives can be classified in five groupings. Depending upon the major results to be accomplished, the objective of the educational experience is physical, vocational, socio-civic, liberalizing (or cultural), or religious, in its aim. Whether the educational experience is guidance, or training, or placement (or a combination); whether the training process is consultation, a series of lectures, classroom, laboratory, or commercial "shop" experience, the objective is the development of abilities, knowledge, appreciations, attitudes, and habits, which may be classified as physical, vocational, socio-civic, liberalizing, or religious.

A course of lectures or study or a curriculum may have more than one objective. Its major or apparent objective may be vocational, but at the same time liberalizing and socio-civic results may be aimed at and secured. At the present time more than 75 per cent of the Y. M. C. A. educational work is vocational in its major objective. Unit courses, vocational in themselves, are combined in curricula extending over three, four, and five years, containing some courses of definitely liberalizing aims. Students entering with special vocational interests are increasingly enrolled in curricula whose objectives are not limited to vocational development.

In the last chapter of his "Outline of History," H. G. Wells says that religion and education have been the closely interwoven influences that have been the chief synthetic forces in the building of civilization. Dr. F. H. Sisson has called attention to the fact that our public school is an experiment in the separation of these forces. There is growing conviction among leaders in all walks of society that the most effective educational experience must provide for character development as well as intellectual and vocational development. The program of the Y. M. C. A. provides for this objective. This is shown most clearly in the statement of purpose of the Y. M. C. A. schools:

- (1) The purpose of the Y. M. C. A. schools is to develop character, no less than ability, through enriching the student's personality. This is to be accomplished without regard to creed, but with the emphasis upon Christian ideals of intelligent unselfish service to men, loyalty to country, and love to God.
- (2) The efficiency of a Y. M. C. A. school shall be measured by its production of character and ability, as well as by statistical and financial results.
- (3) In accordance with this purpose, all the enterprises of the educational department should conform with the highest ethical standards and be permeated with and dominated by a spirit of unselfish service to the students and to the

community. In meeting these standards, the association, through its educational department, will deal honestly and fairly with the student and be single-minded in rendering service, rather than in building up a large enrollment or a great reputation.

The qualifications of an instructor are thus defined:

(4) The instructor should be technically trained, thoroughly familiar with, and competent to teach, his subject. He should be the best available, and should be paid a salary commensurate with his ability. He should be enthusiastic and possess a personality that inspires confidence in his students. He should have the gift of presenting his material in such a way that his statements can be understood, both by the man who has had some technical training and experience and by the beginner.

(5) The prime motive of the instructor should be service to his students; and such service should include not merely the presentation of material and methods, the giving of skill in process, but also the strengthening of courage, resolution, spirit, and all moral and spiritual qualities that are of great importance in determining the success of the individual in his life work.

STANDARD COURSES OF STUDY.

The most significant action at the "Meeting of 146" was the determination to standardize subjects and courses of study. Standard outlines have been prepared in more than 70 unit subjects and in several four-year college grade curricula, making a total of 150 unit courses now comprehended in the standardization plan. In many cases, specially adapted text material and instruction manuals for Y. M. C. A. schools have been written and published.

The process of the standardization as carried on by the United Y. M. C. A. Schools is designed to reflect in the product the best ideas and practices of the association schools and to accord as far as possible with the most progressive educational ideals of the American school world.

The method of procedure is to appoint a commission of approximately five representatives of local associations in the cities where the best work is being done in the subject to be considered by the commission. This commission is brought together at a convenient time and place for a several days' meeting and the task is outlined as follows:

The standard commission of the United Y. M. C. A. Schools in standardizing a course or courses will find four major groups of problems requiring investigation, consideration, and either the determination of standard procedure or the recommending of the practice which seems most desirable.

The first group of problems deals with the organization of work essential to discovering the need for the course and work preliminary to starting the actual promotion.

The second group of problems deals with the promotion of the course.

The third group of problems deals with the instructional problems, involving content, method, and materials.

The fourth group of problems deals with the administration, involving problems of personnel, finance, equipment, and records.

In determining the aim or purpose of the course it is essential that the commission describe the natural groups of prospective students to be enrolled in the course and determine just what skills or personal abilities are to be developed, what sections of knowledge or information are to be given, and what attitudes and habits of character are naturally involved in the technique of the course.

If the commission is dealing with a series of courses which it desires to build into a constructive curriculum, it finds the necessity of stating clearly what personal development values are to be sought for in addition to the distinctly vocational values. Having stated the instructional aims of the course, it is possible for the commission to describe the promotion claims which can be made for the standard course.

In addition to determining the instructional content, it is necessary to determine the standard method of instruction. Shall it be experimental, informational, or strictly instructional? Considering this point, the commission will determine upon the relative emphasis to be placed on the use of problems, projects, lectures, recitations, discussions, laboratory work, etc.

From the existing text and reference material the commission selects and recommends that which has been found to be most satisfactory for the type of men enrolled in the course. If the existing text material is not satisfactory, an effort is made to secure cooperation of publishers in the adaptation of specially prepared text material, and in certain cases the commission found it necessary to recommend production of the text material by the United Y. M. C. A. Schools.

The entrance qualifications of students are defined, and in most courses a description of the credit to be given and examination methods to be used in the granting of credit is determined.

Having thus faced its task, the commission proceeds to work it out according to the best judgment of its members. This process may call for a number of protracted meetings. The results of the commission's work will be expressed in a syllabus which is published and made available for the use of all of the associations. Up to the present time some 30 such syllabi have been published, covering approximately 75 different unit subjects.

PUBLICATION OF TEXTBOOKS.

If the commission feels that there is no existing text material which can readily be adapted to the needs of the course as outlined, the commission may recommend to the board of governors the publication of specially prepared text material. This practice has been followed in a number of subjects, and specially written texts have actually been published in salesmanship, public speaking, foremanship, business letters and reports, income tax, C. P. A. accounting, advertising, and traffic management.

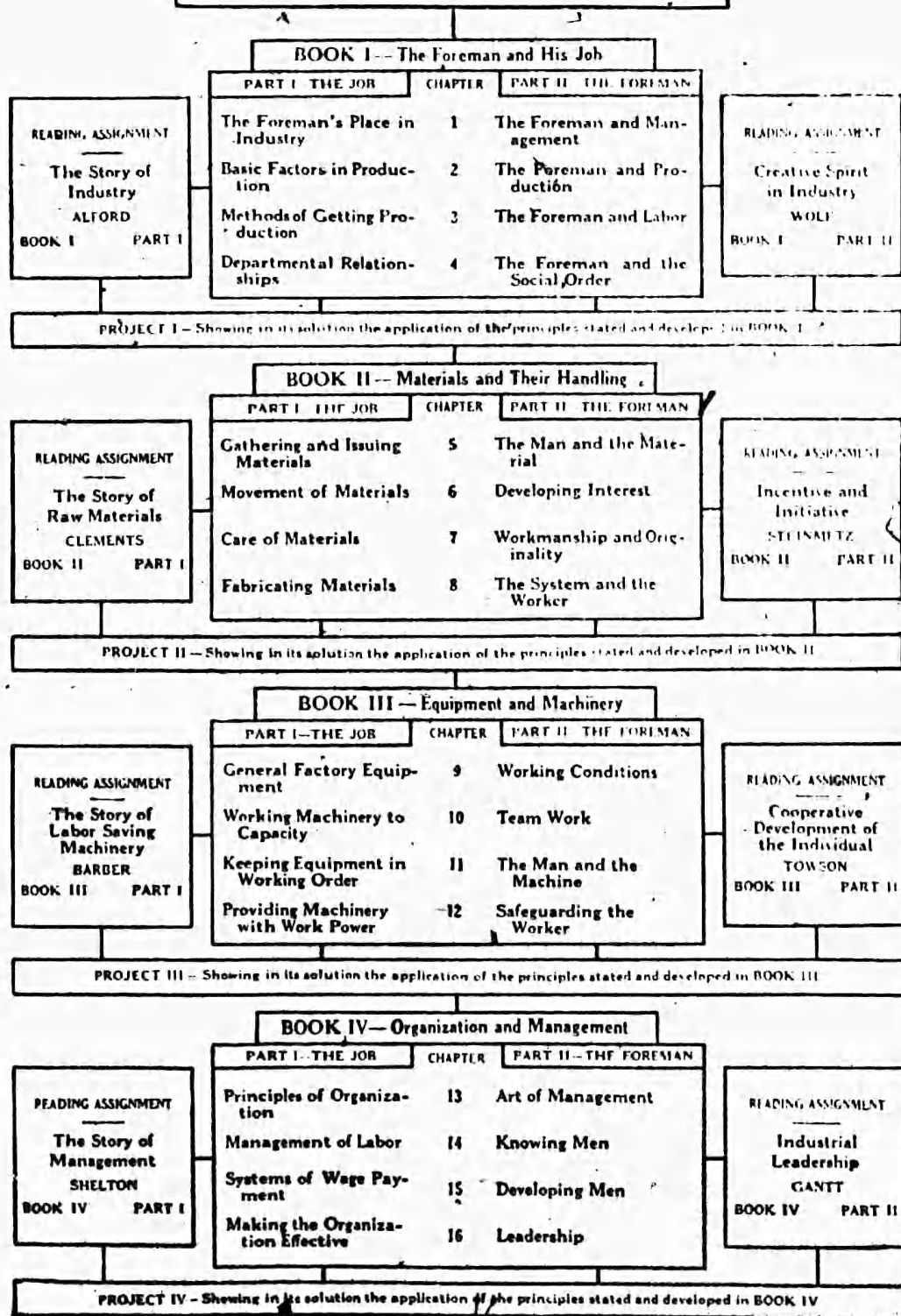
The procedure followed in the production of specialized text material for the United Y. M. C. A. Schools is illustrated by the method used in the production of the foremanship text. Acting upon the advice of the commission that a special text be prepared, an editorial board consisting of a number of industrial and production engineers was formed, with Mr. L. P. Alford, editor of Management Engineering, as chairman. The commission held several protracted sessions during which the general content of the course was determined, the outlines of the several books planned, and writers for the text material selected. The manuscript was then written and when completed was carefully reviewed by the editorial secretary of the United Y. M. C. A. Schools, and by several other persons reading from different points of view, to insure the finished product being technically correct, pedagogically effective, and entirely in accord with the established principles and practices of the association schools.

This text material was produced in accordance with an original outline of the United Y. M. C. A. Schools, with the twofold purpose of teaching a man to be a producer and also of inspiring the producer to be a man. In other words, each chapter or lesson consists of two parts, one the technical instruction in the foreman's job and the other the principles dealing with the development of the human factor in industry. Each of the four volumes of this text material is accompanied by two reading assignments bearing upon the subject matter of the volume. The outline of the complete text material is given herewith.

INSTRUCTION MATERIAL.

In accordance with the recent development in pedagogical science the instruction material for the standard courses in the United Y. M. C. A. Schools makes use of the problem or project method. Project or problem sheets to accompany the individual lessons have been prepared for many of the courses. The purpose of the problem is not simply to illustrate the principles or methods which may be

Outline of United Y. M. C. A. Schools Course in FOREMANSHIP



taught in the lesson with which the problem is connected, but it is also expected that the problem will be used to motivate the study of the text and direct the effort of the student in securing a desirable solution. The project problem usually possesses the following:

(a) It sets forth a typical situation which the student is likely to meet in his daily work.

(b) Following the situation there is a statement of the difficulty that is the actual problem involved in the situation. The problem is so stated as to challenge the student to study and experiment upon the problem.

(c) It directs the mental processes of the student by setting forth, through suggestive questions or directions, the various steps which the student must take in obtaining the solution:

1. He is required to make certain fundamental analyses.
2. His observation of his whole experience and his attention to helpful assignments in his text material is directed.
3. He is required to make judgments in the application of principles and methods.
4. He is required to formulate his judgments into a feasible plan.
5. There may be opportunity of trial and effort in carrying out the plan and testing its effectiveness.
6. Occasionally directions are given for written reports.

It has also been found necessary to develop instruction manuals, because many of the instructors used in the evening schools of the association are men engaged during the day in business and professional life and often without specific training as teachers. These instruction manuals are in two sections. The first treats of the principles and methods of organization and class administration peculiar to the course and outlines the general principles of instruction. The second section contains a detailed outline of each lesson as follows:

1. States the purpose and scope of the lesson.
1. States the class problem, project or situation, the solution of which involves the use of the principles and methods to be discussed in the class session.
3. Gives a detailed outline for the instructor's talk or lecture (made as graphic as possible; often woven around a demonstration).
4. Outlines the major points to be covered in the class discussion.
5. Provides for a summary and suggests how the instructor may stimulate home study and practice work.

These manuals have been found of large practical value and have enabled the association schools to make effective use of men having practical experience in the subjects which they teach, a result which has made the instruction in the Y. M. C. A. schools intensely interesting and valuable to the students.

EXAMINATIONS AND CREDITS.

These processes of standardization in course outlines, text material and instruction methods, lead naturally to the final step in the building of a standardized national system of education, namely, standard interchangeable credit certificates for students. The United Y. M. C. A. Schools now issue such credits under the following general plan:

1. The student must have attended at least 75 per cent of the class sessions.
2. He must have secured a grade of at least 70 per cent on his classroom work.
3. He must have passed a standard examination with a grade of at least 70 per cent. Such standard examination may consist of any of the following three options:
 - (a) The standard examination issued by the central office;
 - (b) An examination prepared by the local instructor and approved by the central office;
 - (c) Successfully completing the problem and project work involved in the course; such work being accepted in lieu of (a) or (b).

These standard national credit certificates will be accepted for credit by any of the schools in the system in cases where students are obliged to transfer from one city to another. They will also be accepted as credits toward collegiate degrees which are now offered by 22 leading association schools, authority for conferring such degrees having been granted by the respective State departments of education.

TYPE OF ASSOCIATION SCHOOLS.

SCHOOLS OF COMMERCE.

More than 50 of the association schools have adopted the standard four-year curricula of college grade work for the school of commerce. There are three of these curricula leading to a degree, namely, accountancy, marketing, and management. The accountancy curriculum is as follows:

ACCOUNTANCY CURRICULUM.

First year.

First semester.

Theory of accounting.
Business economics.
Law of contracts and agency.

Second semester.

Theory of accounting.
Principles of business administration.
Law of partnerships and corporations.

Second year.

Accounting theory and practice.
Money and banking.
Law of negotiable instruments and bankruptcy.

Accounting theory and practice.
Business finance.
Law of property, etc.

Third year.

Constructive accounting.
Industrial management.
Cost accounting.

Specialized Accounting.
Office management.
Cost accounting.

Fourth year.

Auditing.
C. P. A. quiz.
Federal taxes.

Auditing.
C. P. A. quiz.
Statistics and forecasting.

Curricula for comprehensive courses have been developed in marketing and in management, and curricula along similar lines are being worked out in finance and in production, thus covering each of the five general phases of business.

Each curriculum provides for four years of evening school work, with a minimum of six hours of classroom work per week.

The school of commerce commission has approved as standard the following conditions and requirements for schools granting degrees. The degree approved and preferred is bachelor of commercial science (B. C. S.).

(a) The school year should be composed of two regular semesters of not less than 17 weeks each. A summer term may be offered where desired.

(b) There should be three class sessions each week, each session being 120 minutes. Ordinarily this full 120-minute session is given to one subject.

(c) The unit of credit measurement should be points. One point is the unit of credit which indicates satisfactory completion of one 60-minute period of classroom work per week for one semester of 17 weeks. A subject which recites 120 minutes per week throughout one semester would receive a credit of two points per semester.

(d) The minimum requirement for the bachelor of commercial science degree should be 72 points. These points may be earned as follows:

(1) Students following the normal classroom program, as outlined in the accountancy curriculum, would secure 12 points per year or 48 points for the completion of the four-year curriculum.

(2) Credit will be allowed toward the degree of not to exceed 24 points for successful business experience. This credit is given on the basis of not more than 8 points per year. The interpretation of what comprises successful business experience is left to the discretion of the dean, who will take into consideration the nature of the experience and the responsibility attached thereto. Where the experience is of such a routine nature as to warrant a refusal of all or a part of the credit, the student may be required to take supplementary courses to complete the required number of points, or the degree may be held up until the student has secured the necessary successful experience.

It is understood that for every hour of classroom work a minimum of two hours of outside study is expected. In allowing credit for business experience, frank recognition is made of the general business training which the student is acquiring in his daily occupation. This daily vocation becomes the laboratory in which are applied the principles taught in the classroom.

The degree-granting schools are gradually adopting the experience requirements for the standard degree.

About 26,000 students are enrolled in courses and curricula of the schools of commerce, with a constantly increasing proportion taking the full four years' curriculum.

LAW SCHOOLS.

Twenty of the associations have developed evening law schools, which are being conducted on the principle of meeting all of the reasonable demands for adequate legal education and proper development of character in prospective candidates for admission to the bar. All of these schools have at least a three years' course, and it is only a matter of time when all will require four years of legal studies in addition to the other preparation required by the various States of candidates for the bar examination. During the past school year there were 3,716 students in the association law schools, including the Detroit College of Law, with 600 students, Northeastern University Law School, with 800 students, the New York Law School, the Youngstown School of Law, the Cincinnati Y. M. C. A. Law School, and others.

ENGINEERING SCHOOLS.

A most notable example of Y. M. C. A. engineering schools is the Day Cooperative Engineering School of the Boston Y. M. C. A. It is the second largest cooperative engineering school of this type in the United States, having over 900 students enrolled. It is operated on the plan of having two individuals for each industrial job, one student working while the other is in school. At the end of each five weeks the student and the worker exchange places. This school requires the completion of a five years' course, which leads to the degree of mechanical engineer, civil engineer, electrical engineer, or chemical engineer.

Other associations conducting engineering schools with curricula averaging four years, with sessions three or four nights a week, are Detroit, Portland, Cleveland, Youngstown, Boston, Canton, Columbus, Springfield, Mass., Worcester, New Haven, and Los Angeles.

AUTOMOTIVE AND MACHINE SHOP SCHOOLS.

Before the business depression of 1921 there were 75 automotive schools among the associations, enrolling more than 15,000 students. For the past year only about two-thirds as many schools have been in operation. These schools give instruction in automotive repair

work, electricity, battery construction and repair, vulcanizing and acetylene welding, as well as in automotive driving. Standard requirements have been determined for the automotive schools, particularly in the training of repair mechanics.

The standard school offers three types of educational experience: Classroom work; laboratory practice; actual repair experience on commercial jobs.

A considerable number of these schools also teach machine-shop work. With the great demand for trained machine operators which came after the war and the opportunity offered by the United States Government for schools to acquire equipment at a nominal cost, associations found it practicable to enter this field of vocational training, and many large schools were in operation. These schools were much depleted during the school year 1921-22 on account of business conditions, but the year 1922-23 gives promise of larger service.

COLLEGE PREPARATORY SCHOOLS

These schools are of two kinds, the evening preparatory schools, conducted by the associations in all of the larger cities, and the day secondary schools for boys, of which there are eight.

The type of work given in the evening preparatory schools differs considerably from that given in the day secondary schools. In the evening preparatory schools will be found hundreds of earnest students, many of them of mature age, who are obliged to secure their high-school experience through evening study. A few of these students are taking the work simply to secure high-school education. A larger number are taking the work in the evening to prepare themselves for entrance to college in order to take a general academic course. A very large majority of the students in the evening preparatory schools are seeking to secure credit for high-school subjects which are required for entrance into some professional school, such as law, medicine, dentistry, or pharmacy, or they are seeking their credits in order to qualify for professional examinations, such as law and certified public accountant.

The students in the day secondary schools for boys are of high-school age. The desire of many parents to place their boys in secondary schools which have a definite character-building program and a Christian atmosphere has led to the development of such schools as the Huntington School of Boston, the Marquand School of Brooklyn, the McBurney School of New York City, the Hudson School of Detroit, and the "Y" Day School at Washington. These are full-time day secondary schools comparable to the higher type of academies.

MISCELLANEOUS SCHOOLS.

There are other types of schools, such as radio, junior commercial, pharmacy, machine trades, mechanical dentistry, employed boys. etc., which space will not permit to be more than mentioned.

BUILDING REAL EDUCATIONAL INSTITUTIONS.

The standardizing and coordinating work of the United Y. M. C. A. Schools movement has been a large factor in the most significant process going on in the local associations during the past three years, namely, the organization and maintenance of real schools, with standard unit courses arranged in two, three, and four year curricula, and supplanting the former plan of a collection of unrelated classes and subjects. This process has come from a conviction in the minds of the local educational secretaries that part-time education can be made a serious undertaking and can provide for the man obliged to earn his living a practical and worth-while means for obtaining college and technical training. So it has come to pass that, as the schools have substituted curricula for classes, the students in the better grade of association schools are enrolled for two, three, and four year courses instead of for one or two classes for a single semester. This has given stability and continuity to the educational work of the association schools until in many cities this work compares most favorably with that of other educational institutions of similar grade. The description of three typical local association schools which follows will show how thorough and how comprehensive this development has become.

NORTHEASTERN UNIVERSITY.

The Boston Y. M. C. A. conducted educational classes for many years, but its real school work began in 1896, when Mr. Frank Palmer Spear was called as educational director. Under his direction the Northeastern Preparatory School was established in 1897, Law School in 1898, Automotive School in 1903, Evening Polytechnic School in 1906, School of Engineering in 1909, Huntington School in 1909, School of Commerce and Finance in 1911, Vocational Institute in 1921, and School of Business Administration in 1922. The schools of collegiate grade were incorporated as Northeastern College in 1916. Northeastern College, with its secondary and affiliated schools, became Northeastern University in 1922.

At the present time Northeastern University consists of nine units: The engineering school, offering five-year courses in mechanical, civil, electrical, and chemical engineering; the school of busi-

ness administration, preparing young men for administrative duties (both day schools); the school of law, preparing men for the practice of law; the school of commerce and finance, preparing students for accounting and administrative work; the evening polytechnic school, offering three-year courses in civil, mechanical, electrical, chemical, structural, and automotive engineering; Northeastern Preparatory School for Adults; the Vocational Institute, offering short, intensive courses in a great variety of subjects (the last five being evening schools); Huntington School for Boys, a day preparatory school of high grade; and the automotive school, with both day and evening sessions, offering courses in all phases of automotive industry, with special instruction for owners, salesmen, mechanics, and chauffeurs.

In addition to the 5,000 students enrolled in the above schools in Boston, 3,000 students are enrolled in the divisions of Northeastern University maintained by the Y. M. C. A.'s in Springfield and Worcester, Mass.; Providence, R. I., and New Haven and Bridgeport, Conn.

Northeastern University is also actively engaged as the distributing center for the home study program of the United Y. M. C. A. Schools and is rapidly developing a large and unusual constituency.

Northeastern University, with its several divisions, is housed in eight large buildings, and the Boston building is particularly well equipped with chemical, physical, and electrical laboratories, drafting rooms, shops, libraries, lecture halls, classrooms, and large and miscellaneous equipment.

The university, through its extension department, is carrying its work outside of its buildings into industry and business through resident and home study instruction and is drawing to itself a very earnest and capable body of young men.

The staff of the university has grown from one full-time official and 10 part-time assistants to over 300 persons, a large percentage of whom are on full time, and the budget has increased from \$2,800 in 1896 to \$700,000 in 1922.

DETROIT INSTITUTE OF TECHNOLOGY AND COLLEGE OF LAW.

In 1891 the Detroit Y. M. C. A. began its educational work as an evening school under the name "Association Institute." The name was changed to "Detroit Technical Institute" on May 1, 1908, and was incorporated as such on November 10, 1908, with power to confer degrees on graduates of its professional schools. On May 9, 1918, more clearly to define its broadening activities, the name was again changed to "Detroit Institute of Technology."

The college of law is duly authorized to confer the degrees in law conferred by similar colleges. Its course comprises 4 school years of 36 weeks each, with 10 hours of recitation per week. The college holds afternoon and evening sessions.

The college of pharmacy, now in its thirty-second year, was organized in 1890 as the department of pharmacy of the Detroit College of Medicine. It severed its connection with that school in 1905. In 1907, while still retaining its original identity, it became the department of chemistry and pharmacy of the Detroit Institute of Technology. This department is referred to as the Detroit College of Pharmacy.

The school of commerce teaches modern business as a science. Through standardized courses—day, late afternoon, and evening—it helps to supply the growing demand for business-trained men. The following four-year curricula are offered: Accountancy, marketing, management, finance, production.

The school of engineering offers courses in five departments: Electrical engineering, mechanical engineering, chemical engineering, automotive engineering, machine-trade courses. There are five-year cooperative courses of collegiate grade, requiring for entrance a high-school education or its equivalent. These courses lead to the degree of bachelor of science.

The Hudson School prepares boys for the best colleges and professional schools, and furnishes the best business and technical training for those who can not pursue their studies further than the secondary school. The larger aim of the school is the development of manly, educated, Christian men. The Hudson School is an accredited school and member of the North Central Association of Colleges and Secondary Schools.

The evening preparatory school offers full grammar and high-school courses to men who can not leave their day work in office, store, or factory.

The School of Religion offers courses of collegiate grade, dealing with the chief fundamental lines of religious study, such as Biblical literature, history, and doctrine, philosophy and psychology of religion, and the principles and methods of religious education and training.

The total enrollment in the Detroit Institute for the last school year was 5,006 and the operating budget for the year was \$316,000.

YOUNGSTOWN INSTITUTE OF TECHNOLOGY.

The Youngstown Institute of Technology, prior to 1916, was known as the Association Institute. In 1911 the Youngstown School of Law, a division of the institute, was founded. This was followed,

two years later, by the founding of the School of Commerce, both of these schools being from their inception schools of college grade.

The institute to-day is the only school giving college grade courses in the Mahoning Valley. The institute is divided into two divisions—the collegiate division, embracing the four schools of college grade, and the preparatory division, which is made up of those schools which do not demand high-school graduation or its equivalent for entrance.

In the collegiate division are found the day and evening engineering school, giving courses in mechanical, electrical, chemical, and civil engineering; the Youngstown School of Law, which is an evening school of college grade with a student body of 200 and a faculty of 12 men, who are leaders in the legal profession; the School of Commerce and Finance which is a four-year collegiate course; and the College of Liberal Arts which is, for the present, operated in cooperation with Hiram and Thiel Colleges. A plan is being worked out whereby these colleges loan their strongest professors for regular college courses. Fourteen different liberal arts courses are being given under this plan.

In the preparatory division are found the trade school, which provides definite specific training along the lines of 20 different trades, including automobile mechanics, machine-shop practice, oxy-acetylene welding, mechanical drafting, reinforced concrete, structural steel, etc. In the preparatory division are also located the day and evening high school, which is a preparatory school for boys and girls, the junior business school, and the elementary school.

In addition to the two divisions—the collegiate and the preparatory—the institute this year, in cooperation with the Youngstown Federation of Churches, began the operation of a school of religious education. This will later be raised to collegiate grade and become one of the schools of the collegiate division.

The school has 6 administrative officers, 7 full-time teachers, and 52 part-time teachers. Last year the school enrolled 2,595 men and women, and the prospects are that this number will be somewhat larger this year. Approximately one-fifth of the students are in the day schools, the remainder being in school during the evening. The total budget for the operation of the Institute of Technology for the current year is \$102,510. Each year nearly 300 students are from outside the city, coming from a radius of 40 or 50 miles from Youngstown. Over the past three years, the statistics show that the average age of students has been approximately 24 years. Practically all students are wage earners, many of them being men with families.

The school is recognized by existing educational agencies to a large degree. The school of law, in 1920, was authorized by the department of education and the Supreme Court of the State of Ohio to grant the degree of bachelor of law to successful candidates. In the entire 12 years of the history of the school of law not a single graduate has failed to pass the State bar examination.

THE 26 LARGEST SCHOOLS.

The list below gives the 26 schools which in the school year 1921-22 have an enrollment of 1,000 or more students each:

Detroit	5,006	New York (east side branch) ..	1,792
Boston	4,811	Seattle	1,430
Cleveland	4,725	Los Angeles	1,412
Chicago	4,391	St. Louis	1,339
Washington	3,562	Columbus	1,263
Philadelphia (central branch) ..	3,503	Minneapolis	1,210
New York (west side branch) ..	3,442	San Francisco	1,169
Youngstown	2,595	Cincinnati	1,145
Brooklyn (central branch)	2,496	Brooklyn (Bedford branch)	1,133
Newark	2,168	Pittsburgh (East Liberty branch)	1,128
New York (Twenty-third Street branch)	2,054	Philadelphia (west branch)	1,106
Portland	1,867	Omaha	1,014
Baltimore	1,861	Camden	1,005

CORRESPONDENCE INSTRUCTION.

In the development of its national program of education the Y. M. C. A. found that it could greatly extend its service by offering its courses of instruction by the correspondence method to men who were so situated that they could not attend resident classes. The opportunity to organize this work upon a broad scale presented itself in the fall of 1919 in connection with the scholarship plan of the National War Work Council of the Y. M. C. A., under which a great many ex-service men were offered financial assistance in the realization of their educational plans. Taking advantage of this opportunity, the board of governors started the development of correspondence courses in November. A staff of experienced leaders and instructors was employed, and in February, 1920, the first courses of instruction were offered for use. The first student was enrolled late in February, and enrollment continued throughout the spring months at the rate of about 200 per week, practically all of these early students being recipients of scholarship awards by the War Work Council. At the end of the first year, or March 1, 1921, 21,475 different students had been received by the correspondence school, which is known as the extension division of the United Y. M. C. A.

Schools, and the enrollment of students other than ex-service men had been begun. The enrollment has grown steadily, and on October 31, 1922, reached a total of 35,193.

Broadly classified these students may be grouped as follows:

18,300 students, or 52 per cent of the total, in business and commercial subjects.

10,910 students, or 31 per cent, in technical subjects, including science, mathematics, drawing, engineering, etc.

3,519 students, or 10 per cent, in academic subjects.

1,760 students, or 5 per cent, in agricultural subjects.

704 students, or 2 per cent, in leadership training subjects.

Three guiding principles govern in this work:

First. It is a fundamental principle of the Y. M. C. A. that the organization exists for service to young men. The correspondence courses are, therefore, designed to give to the students the best possible service. The extension division is intended to be self-supporting, but nonprofit making.

Second. In its resident educational work the association has always emphasized the personal element in instruction. In its correspondence school this same principle is followed as far as it is practicable to do so. The instruction is given with the largest possible amount of individual attention to each student.

Third. The Y. M. C. A. seeks to combine education and character building in a very definite way. This same principle characterizes the correspondence instruction. A special department is conducted for the purpose of giving to the students the help they need in the solution of personal problems, especially those which have a bearing on the building of the best qualities of character and citizenship.

Contrary to the general practice in correspondence schools, the extension division does not write its own text material. Instead, it uses in every subject the newest and best standard texts available in the market, and bases its instruction papers upon these texts. It is, therefore, possible to improve the text material in any subject whenever a newer and better book on the subject may be issued by any publisher anywhere. The instruction material accompanying the text is written by the thoroughly competent instruction staff of the school and is supplemented by personal correspondence with the students. The extension division emphasizes the fact that the text material of a course of instruction in a correspondence school is not of more importance than is the textbook in a resident class. Personal instructional relationship between the teacher and the student is just as vital, just as necessary, in high-grade correspondence teaching as in resident school work.

The Y. M. C. A. correspondence school is intimately related with the resident schools of the associations in the various cities of the

country, and uses the same standard course outlines and standard text material as the resident schools. It is, therefore, possible for any student who may change his position, occupation, or residence to transfer his courses from a resident school to the correspondence school, or vice versa, without loss of time or money.

In the three years since the correspondence school was organized it has developed a large number of courses and offers instruction in the following groups:

Courses.		Courses.	
Commerce.....	30	Electrical.....	19
Business building.....	10	Agriculture.....	11
Law.....	3	Rural engineering.....	9
Traffic management.....	6	Pure and applied mathematics.....	25
Commercial art.....	1	General education.....	56
Drawing.....	36	Modern languages (phonographic method).....	30
Architecture.....	26	Leadership training.....	8
Civil engineering.....	25		
Mechanical.....	35		
Power.....	11		
Automobile.....	5	Total, omitting duplicates.....	306

Those who are familiar with this recent development in educational work are well aware that correspondence instruction has quite passed the experimental stage, and that it is filling a fundamental need. As the years pass by, it will become of increasing importance in providing suitable educational opportunities for millions of adult employed men and women who ought to have additional opportunities for education, especially in vocational training, but who are so situated that they can only get it by the correspondence method of instruction.

EDUCATIONAL ASSISTANCE FOR EX-SERVICE MEN.

In the summer of 1919, when it became apparent that the War Work Council of the Y. M. C. A. would not use all of its funds set aside for educational work overseas, plans were developed to provide financial assistance for ex-service men in their educational and vocational plans. Such help was most timely. Thousands of young men, receiving their discharge from military and naval service, found themselves facing the changed economic conditions which followed the war, and were under the necessity of making vocational readjustments. Hundreds of others left the service with a new appreciation of the value of education but without the means to secure the training they needed. Still others there were whose educational plans had been interrupted by the war, and who found it difficult to resume these plans without first earning and saving sufficient funds to carry on the work.

Having these conditions in mind, the War Work Council appointed an educational service committee, under whose direction there was developed a comprehensive plan for assisting ex-service men in general education and in vocational readjustment. There was also conducted under this committee's supervision an extensive program of Americanization work. The appropriations for all phases of the committee's work have aggregated \$6,500,000, of which more than \$5,250,000 was paid out in scholarships and tuition fees.

SCHOLARSHIP AWARDS.

Believing that the scholarship awards should be fairly distributed throughout the entire country and among all classes of ex-service men, the fund was divided on the basis of population, and furthermore was designed to offer equal opportunities to all ex-service men regardless of their previous education or their place of residence. For this reason the awards were made in all grades of schools, from the most elementary to the colleges and universities. In some parts of the South, where there were many illiterate colored ex-service men, special elementary schools were established to meet their needs, and for men in all parts of the country who could not attend resident schools instruction was provided by correspondence.

The awarding of scholarships in schools below college grade was done by local committees, of which there were more than 1,600 in operation, enlisting over 7,000 volunteer workers, and serving practically all parts of the continental area of the United States. The collegiate scholarships were awarded by State committees.

These committees were painstaking in their work. They interviewed the applicants and studied their needs, their service records, their character qualities, and looked up their references. This care was necessary in most communities, as nearly every committee had more applicants than its portion of the fund would provide for, and it was the desire to assist the most worthy.

The scholarship awards made from the beginning of this service to December 31, 1922, when the fund was practically exhausted, numbered 106,947. Among the recipients are residents of fully 90 per cent of the 3,000 counties in the United States. As divided among various types of schools the awards may be classified as follows:

In local Y. M. C. A. schools.....	49,478
In non-Y. M. C. A. schools.....	13,864
In correspondence schools.....	30,333
In universities and colleges.....	12,438
Total	106,113

A mere statement of the figures fails to give any idea of the value of this work. The awards made to students in colleges and universities were scattered among 992 different institutions, and in many hundreds of cases the students would not have been able to continue their college work without the aid given by these awards.

Not less valuable than the help given to college students was that given to the thousands who pursued vocational courses in trade and technical schools and in the day and evening schools of the Y. M. C. A., and in the Y. M. C. A. and other correspondence schools.

VOCATIONAL GUIDANCE.

A valuable service set up under the committee's plan was that of vocational guidance and employment. Through this service many men were enabled to resume interrupted courses of study sooner than if dependent on their own resources; others were able to adjust themselves to economic conditions; and many found it possible to realize those higher ideals of life careers which grew out of their war experience.

Instruction for local association secretaries desiring to assist ex-service men in their choice of vocation was provided. Local associations were reimbursed for such service and for assistance rendered to ex-service men in finding permanent positions of employment.

During the period to June 30, 1921, more than 70,000 ex-service men were given valuable assistance through this bureau at an expense amounting to \$74,538. The reimbursements as to local associations were discontinued June 30, 1921, but the counselling service was continued as a permanent feature of the program of the United Y. M. C. A. Schools.

The educational service fund also financed a vocational placement service in connection with local associations by means of which more than 100,000 ex-service men were assisted in finding employment; a system of lectures on citizenship in connection with local posts of the American Legion; and a work of Americanization among illiterates and foreigners in industry, growing out of the similar work done for them in the Army.

AMERICANIZATION WORK.

During the period under consideration the association also carried on one of the largest programs of Americanization work done by any welfare organization. Special secretaries for this work were provided in more than 176 cities, and a comprehensive program of English teaching, citizenship preparation, lectures, and entertain-

ments, was conducted, and assistance in securing naturalization papers was rendered; 49,345 men were taught to speak English; 33,053 were assisted in securing their naturalization papers. In addition to this there was a total attendance of 2,899,547 at 14,357 lectures and entertainments designed to inculcate the spirit and ideals of America. For this work the sum of \$500,000 was appropriated and expended.

CONCLUSION.

The progress in educational work made by the Y. M. C. A. during the past three years is most gratifying. Not only have the numbers of students and schools increased in considerable proportions, but the advance in the quality of education and in the comprehensiveness of courses and curriculum has also been noteworthy. But, on the other hand, those responsible for the development of this movement feel that only the preliminary steps have been taken toward the attainment of the ultimate goal, which is the perfection of a continental, standardized, Christian character building program of education designed to provide opportunities for the development of young men in every part of the national domain.

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CHAPTER XXVII.

EDUCATIONAL WORK OF THE KNIGHTS OF COLUMBUS.

By MARK J. SWEANY.

Director of the Knights of Columbus Educational Activities.

CONTENTS.—Historical sketch—Early educational work of the Knights of Columbus—Educational work for former service men: 1. Evening schools; 2. College scholarships; 3. Correspondence courses—Conclusion.

HISTORICAL SKETCH.

The Knights of Columbus is a fraternal and beneficent society of Catholic men, founded in New Haven, Conn., on February 2, 1882, and incorporated under the laws of the State of Connecticut on March 29, 1882.

On December 31, 1922, the total membership of the Knights of Columbus was 774,189. This membership was divided among 59 State councils, and the State councils were in turn divided into 2,290 subordinate councils. The membership is confined to the United States and its Territorial possessions, to Canada, Mexico, Cuba, and the Panama Canal Zone.

EARLY EDUCATIONAL WORK OF THE KNIGHTS OF COLUMBUS.

The purpose of the founders was to develop practical Catholicity among the members, to promote educational and charitable activities, and, by means of its insurance department to give financial assistance to the families of deceased members. From the very beginning of the organization, education has always occupied an important position in the activities of the Knights of Columbus, but in the earlier years of the existence of the order the educational activities were carried on almost entirely by the individual subordinate councils of the organization and were confined to lecture courses, the founding of scholarships in local institutions, the placing of books in libraries, and other matters of a similar nature.

In 1904 the order presented \$50,000 to the Catholic University of America at Washington, for the purpose of endowing a chair in American history. This work is still being carried on from this fund at the university.

In the years immediately following the endowment of the chair in American history at the Catholic University of America at Washington, \$500,000 was raised among the members of the organization to create an endowment in perpetuity for 50 scholarships at

the Catholic University. The campaign to raise this money was carried to a successful conclusion, and the scholarships were instituted and have been since maintained. These scholarships are confined exclusively to the Catholic University of America and are limited in their application to active members of the Knights of Columbus or to the sons of such members. Each year competitive examinations are held, and as a result of these examinations students are selected for these scholarships at the Catholic University. So far as is practicable, students are apportioned on a geographical basis. As an illustration of the manner in which examinations for these scholarships are handled, I give below a notice published in the Knights of Columbus monthly magazine "Columbia":

KNIGHTS OF COLUMBUS SCHOLARSHIPS.

A competitive examination for the graduate Scholarships established by the Knights of Columbus in the Catholic University will be held April 14, 1923.

Applications should be filed before March 15, 1923.

Eligible candidates.—The examination is open to men students who have received the Bachelor's degree in Arts, Science or Letters and to those who are now in the Senior class in college. Students who desire, as K. of C. Scholars, to enter the Law School of the University, must have received both the Bachelor's degree (in Arts, Science or Letters) and the degree Bachelor of Laws.

Subjects of examination.—All candidates are required to take examination in English, History, and Mathematics. Each is further required to take examination in Physics or Chemistry or Biology; and in Latin or Greek or one of the modern languages (French, German, Spanish). The candidate will select the science and the language in which he desires to take examination.

Tenure.—The Scholarship entitles the holder to board, lodging and tuition in the University during the academic year. It is available for the minimum period required for obtaining an advanced degree, viz, for the Mastership in Arts, one year; for the Mastership in Philosophy, two years; for the Doctorate in Philosophy, three years.

DIRECTOR OF STUDIES,

The Catholic University of America, Washington, D. C.

EDUCATIONAL WORK FOR FORMER SERVICE MEN.

When the United States of America declared war against Germany in April, 1917, the Knights of Columbus, through their supreme board of directors, passed the following resolution:

The supreme board of directors of the Knights of Columbus at a regular meeting held on the 14th day of April, 1917, in the city of Washington, realizing that the crisis confronting our country calls for the active cooperation and patriotic zeal of 400,000 members of the order in this country to our Republic and its laws, pledge their continued and unconditional support to the President and the Congress of the Nation, in their determination to protect its honor and its ideals of humanity and right.

In accordance with the spirit of this resolution, the order at once undertook to raise for welfare purposes among the soldiers \$1,000,000.

This amount was raised by per capita tax on the membership. A few months later drives for raising money for Knights of Columbus welfare work among soldiers were carried on by the local councils in all parts of the country. The total amount raised by these drives was about \$14,000,000. At a later time, in November, 1918, just on the eve of the armistice, the Knights of Columbus participated with other welfare organizations in raising money for welfare work among the soldiers. The amount apportioned to the Knights of Columbus and the National Catholic War Council was \$30,000,000. As a result of the money raised in this drive and the earlier drives, the order was in a position to carry on systematic welfare work among the soldiers, both at home and abroad. Secretaries and chaplains were placed in all Army camps and cantonments. Knights of Columbus buildings were erected and community centers were established. A total of 260 buildings were erected, 1,134 secretaries placed in this country, and 309 units put in operation. Foreign headquarters were established in Paris and London. The number of secretaries sent overseas was 1,075. The motto adopted by the Knights of Columbus in its war work was, "Everybody welcome—everything free," and this slogan was literally adhered to throughout the war. At the close of the war the Knights of Columbus still continued their welfare work in the Army camps in this country and in certain places abroad until November, 1919, when the United States Government took full control of such matters. At this time the Knights of Columbus still had a fund of about \$19,000,000 in its possession. Since that time, still following its motto of war times—"Everybody welcome—everything free"—the Knights of Columbus has been conducting an educational system free to former service men which has been maintained not only out of the interest but out of the principal of the fund remaining at the close of the war.

The three outstanding features of our educational work since the war have been:

1. The evening schools.
2. The scholarships.
3. The correspondence school.

The educational work given in all of these subdivisions has been entirely free to former service men.

1. EVENING SCHOOLS.

(a) *Camp schools for service men.*—In June, 1919, the Knights of Columbus instituted educational courses at Camp Devens, Mass., for the men in service. By November 1, 1919, the date on which we were demobilized out of the camps, we were conducting educational courses in 25 camps and naval stations, with a total registration of

5,884 students. These courses were successful; so successful, in fact, that general regret was expressed by the enlisted men and by the respective officers in charge when we were ordered to withdraw. But our educational experience in the camps, brief though it was, brought home to us very forcibly the realization that there was need among the young men of draft age for training in vocational subjects and an eagerness on their part to take advantage of educational opportunities when these were presented to them.

If this was true of the men in service, it could be no less true of the men discharged from the service. In fact, the plight of the latter, confronted as many of them were with the necessity of seeking new employment upon their return to civil life, was even more acute and their eagerness to grasp educational opportunities was more intense than ever before.

(b) *Evening schools supported by war fund free to ex-service men.*—The Knights of Columbus was the first organization to offer to the able-bodied ex-service man, without cost to himself, evening courses in academic, commercial and trade, or technical subjects to assist him to remove the deficiencies in his educational training occasioned by the war and to fit him for more attractive occupations and greater usefulness. The first Knights of Columbus evening school was opened in Boston, Mass., on July 7, 1919. On September 6, 1919, it was decided that no more valuable service could be rendered than the institution of schools of this type in the larger cities throughout the country, to be supported out of the fund remaining in our hands. Arrangements were made for the carrying out of this plan, with the result that the work spread rapidly to all parts of the country, so that before the close of the school year 45 committee schools were established and 31,163 students were enrolled. Although provision was made for the admission of applicants who had not been in service, upon payment by them of a tuition fee, the number of pay students enrolled during this first school year was an inconsiderable part of the entire membership.

(c) *Council schools supported by fees paid by students.*—The action of the supreme council of the Knights of Columbus at Buffalo on August 7, 1919, authorizing the appointment of a committee on education to put into effect the institution of a system of council schools to be maintained by fees paid by students, and appropriating \$50,000 for administrative purposes, was not in its original intent in any way related to our efforts on behalf of the ex-service man, but it was no less practical in its aim and patriotic in its purpose. Courses were to be offered by councils to members and to others desiring occupational guidance and training under auspices that would inculcate clearer ideas of American life, to the end that the knowledge

gained in these schools would be used not only for the advancement of the individual but also for the greater good of the community.

In keeping also with the desire to provide under our auspices free opportunities for advancement to as many ex-service men as possible, we decided to pay out of the war fund the fees of ex-service men attending as students in council schools to be established in conformity with the plan and to be approved by the committee.

There were 21 council schools, instituted and successfully conducted during the school year 1919-20, giving instruction to over 7,000 men and women.

As will be noted from the description above, the committee school is one that is under the direct control of the Knights of Columbus educational committee and one to which funds are supplied directly from the central office of the order at New Haven, for the maintenance of all school work. A council school, on the other hand, is one undertaken on the initiative of the local subordinate councils and assisted only by the central organization to the extent that the tuition fees of all service men are paid from the war fund. It will be noted further that, while service men are free to enter both committee and council schools without any payment of tuition or other charges, the evening schools are also open to civilians upon the payment of a moderate tuition fee. Both committee and council schools have been maintained up to the present time.

During the school year 1920-21 the number of committee schools increased from 48 to 87 and the number of council schools increased from 21 to 38. The enrollment in all committee schools increased from 31,163 in 1919-20 to a total of 79,843 for the year 1920-21. The enrollment in all council schools increased from 3,198 to 19,467, so that during this period the Knights of Columbus conducted a system comprising 125 evening schools, located in 31 States. The total enrollment in all schools was 99,310 students, distributed among 86 different courses.

During the school year 1921-22 the total number of evening schools in operation was 106, comprising 75 committee schools and 31 council schools. These schools were distributed among 37 States. The total enrollment in all courses in all schools was 89,931, comprising a total of 67,196 in committee schools and 22,735 in council schools. The total number of courses offered was 86. While the total number of students enrolled for the year 1921-22 was smaller to some extent than for the preceding year, yet the student body has shown a marked improvement from year to year. During the earlier period of the free evening schools a certain number of young men lacking stability and initiative were enrolled in our courses. They were attracted largely by curiosity and excitement for some-

thing new in educational work. This type of young man had no serious purpose in view and soon dropped out. As a consequence, our student body for 1921-22 was of a superior type. A second reason for this improvement in the student personnel was unquestionably the growing confidence in the Knights of Columbus evening school as an educational institution. Furthermore, the membership of the schools during the past year has to a large extent included students who were in attendance in earlier years and whose persistency was evidence of their appreciation of the opportunities offered and their seriousness in the pursuit of such opportunities.

As complete statistics for the school year 1922-23 can not be compiled until the close of the school year, it has been thought better not to insert incomplete statistics in regard to the current school year. The evening schools, however, are still being maintained in the same manner as they have been in previous years.

2. COLLEGE SCHOLARSHIPS.

The Knights of Columbus was not only the first organization to provide for able-bodied ex-service men opportunities for free instruction in evening vocational courses, but it was also the first to offer to them full scholarships in college courses leading to the degree of bachelor of arts, bachelor of science, or their equivalent. The first announcement of Knights of Columbus scholarships to ex-service men was made on August 17, 1919, when the following public statement was issued:

With a view to getting the men who return from Army and Navy service back to serious educational occupation, and to refitting them to take part in the most useful fields of reconstruction, the war activities committee of the Knights of Columbus offers 50 scholarships, including tuition, incidental fees, books, necessary equipment, board, and lodging, for a complete technical, scientific, mining, agricultural, or foreign service course; also 50 scholarships for a complete academic course.

It was stipulated, in addition, that applications would be accepted for scholarships only in certain institutions designated by the committee, and that no professional or postgraduate courses, such as law, medicine, and dentistry, would be given.

While it was the intent of the committee, as originally announced, to limit the number of scholarships to 100, to be awarded on a competitive basis, the comparative merit of applicants to be determined by examinations to be conducted by the board of entrance of the various institutions, the committee later decided that a scholarship would be awarded to every applicant who might be certified as eligible for admission to the institution for which he applied, and that the time limit for receiving applications would be extended to September 30, 1919.

Every candidate whose application, in proper form, was received within the time limit set by the committee, and who was certified as eligible for admission to the college for which he applied, was notified that he would be awarded a scholarship. In every instance the decision as to the eligibility of candidates was made by the college authorities.

♦ The total number of applications received within the time limit set was 2,291. Of this number many could not be considered because applicants failed to specify the preferred college or course, or because application was made either for colleges or for courses that were not included in the offer.

The total number of applications submitted to the colleges was 1,002. Careful investigation of the qualifications of each of these applicants was conducted by the college authorities, with the result that, after final reports were received on all applicants, 440 students were certified as eligible for entrance. Of this number, 403 actually enrolled in the courses for which they were awarded scholarships.

As was announced in September, 1919, no more scholarships will be offered, and none of those now held by students will, under any condition, be transferred to other persons.

Action on applications.—The following tables show the number of complete applications, the number of applicants certified as eligible, and the number of scholarships awarded:

Institutions.	Number of applicants.	Number of eligible applicants.	Number scholarships awarded.
<i>Technical.</i>			
University of California.....	23	12	11
The Catholic University.....	8	8	8
Colorado School of Mines.....	45	2	2
Georgetown University Foreign Service School.....	108	47	47
University of Illinois.....	71	50	44
Louisiana State University.....	10	11	11
Manhattan College.....	1	1	1
Massachusetts Institute of Technology.....	113	58	46
Michigan Agricultural College.....	25	5	5
University of Minnesota.....	35	20	20
University of Missouri.....	19	0	0
Montana State College of Agriculture.....	6	1	1
Ohio State University.....	24	5	5
Oregon Agricultural College.....	3	3	2
University of Pennsylvania.....	77	31	27
The Polytechnic Institute of Brooklyn.....	37	6	5
Purdue University.....	5	5	5
Sheffield Scientific School.....	45	19	18
Stevens Institute of Technology.....	43	15	15
St. John's University of Toledo.....	0	0	0
West Virginia University.....	5	3	2
Worcester Polytechnic Institute.....	30	7	7
University of Notre Dame.....	32	17	15
Total.....	803	326	297

Institutions.	Number of applicants.	Number of eligible applicants.	Number of scholarships awarded.
<i>Academic.</i>			
The Catholic University.....	23	15	15
Creighton University.....	5	3	3
University of Dallas.....	2	2	1
DePaul University.....	2	0	0
University of Detroit.....	8	3	3
Dubuque College.....	3	0	0
Duquesne University.....	3	2	2
Fordham University.....	41	17	17
Gonzaga University.....	2	2	2
Holy Cross College.....	34	22	22
Loyola University (Chicago).....	1	0	0
Loyola University (New Orleans).....	2	2	2
Manhattan College.....	7	0	0
Mount Angel College.....	0	0	0
Mount St. Charles College.....	1	1	1
Niagara University.....	8	2	2
Notre Dame University.....	36	8	8
Santa Clara University.....	4	1	1
St. Louis University.....	5	2	2
College of St. Thomas (St. Paul).....	6	4	2
Villanova College.....	6	3	3
Total.....	199	89	86

In addition to the total of 383 scholarships mentioned above, 20 more free scholarships, on account of unavoidable delays, were later established upon the same general principles. This makes a total of 403 scholarships in all.

3. CORRESPONDENCE COURSES.

The outstanding feature of our educational work at the present time is the Knights of Columbus Correspondence School, which was instituted during the year. By reason of its intrinsic importance, the widespread interest that it has evoked throughout the country, and its rapid expansion since its inception in February, 1922, this new undertaking demands a rather more detailed and extended presentation.

The purpose underlying this extension of our educational program was briefly set forth in our report to the supreme council in August, 1921, as follows:

It is apparent that, through the scholarships awarded to students of advanced standing and through the evening schools conducted in the larger cities throughout the country, we have provided widespread educational opportunities of inestimable value to those who have taken advantage of them. In order to round out to its fullest possibilities the service that we are endeavoring to render, there still remains one important step to be taken—the extension to the ex-service men in the smaller communities and in the rural districts of the advantages of free educational opportunities through correspondence courses.

Preliminary to putting the project into actual operation, an intensive study of correspondence schools systems and methods was conducted by the Educational Bureau at New Haven, with the result

that definite plans for the institution and administration of home-study courses were formulated by the close of the year 1921, and the first formal announcements of them appeared in the February, 1922, issue of "Columbia."

Before entering upon a detailed recital of results to date, it appears advisable to present briefly the fundamental principles underlying the successful conduct of correspondence courses in general, together with such other information as is pertinent and necessary for a thorough understanding of the scope of our work and the method of administering it.

Exclusively for ex-service men and women.—It should be stated at the outset that our present plans contemplate the conduct of correspondence courses for ex-service men and women exclusively. Under no conditions will courses be issued to applicants who can not submit conclusive proof of honorable discharge from Army or Navy service during the World War. Necessarily, by reason of the nature of the trust that we are administering, only veterans of the United States service, together with those veterans of service in the forces of the Allies who are now residents of the United States, are eligible for enrollment under the terms of the offer.

The value of instruction by correspondence.—For those who are acquainted with the remarkable growth of the field of correspondence instruction during recent years it is unnecessary to state that the decision of the Knights of Columbus to undertake this extension of its educational program is in accord with the general tendency among educational institutions of recognized standing throughout the country. Correspondence instruction on an extended scale, distinctively an American development, is a significant phase of that democratic, liberal, all-inclusive American spirit of extending to the individual opportunities for self-improvement and advancement.

While it can not be rightly claimed that correspondence instruction possesses all the advantages of classroom instruction under the immediate supervision and guidance of the teacher, it is nevertheless true that the distinctive conditions attaching to the correspondence method are at least in some courses peculiarly conducive to a thorough mastery of the subject matter. Properly conducted home-study courses establish habits of concentration, accuracy, and perseverance. They develop initiative, resourcefulness, and self-reliance. They train the student to think for himself, to weigh evidence, and to form independent judgments.

Requisites for success.—The successful administration of home-study courses and their value to the students undertaking them depend upon a careful study of and attention to the peculiar diffi-

culties inherent in the work. The requisites for satisfactory service may be stated in general as follows:

Recognition of the limitations of the field in regard to subjects that may or may not be successfully conducted by this method.

Careful selection of text material and its division into well-balanced study units or assignments.

Organization of definite supplementary instruction and information for the direction and assistance of the student.

Preliminary proof of the student's qualifications to undertake the course for which he applies, and personal advice and guidance to him in this connection.

Arrangements for prompt examination and correction of students' reports by expert instructors.

Establishment of a personal relation, as far as possible, between student and examiner by the free interchange of question and comment.

It is upon these essential considerations that the plans of the Knights of Columbus for the institution and conduct of its correspondence courses have been based.

Cooperating agencies.—We are indebted to those directors of university extension departments in the many educational institutions throughout the country offering home-study courses who have assisted us by their guidance and cooperation in the initiation and development of our plans. In some instances we have even been permitted to use their home-study material without cost or at greatly reduced rates. As a further indication of the willingness of these departments to cooperate with us in the interests of the ex-service man, they have permitted us to engage the services of their own experts in the correction and criticism of students' papers.

It is to be understood, however, that these courses are conducted under the immediate direction of the Knights of Columbus, and that no other agency is directly concerned in or responsible for their administration.

In addition to these courses, it has been found necessary to have prepared under our own direction certain courses for which satisfactory material did not appear to be otherwise available. These and all other courses that may be offered will likewise provide students with the opportunity to benefit by the criticism and guidance of recognized experts in the respective subjects.

Application procedure.—Any ex-service man or woman desiring to enroll in a course is requested to write to the supreme secretary for an application blank, and to return it properly filled out and sworn to as required. If the information that he submits satisfies the educational bureau that he is properly qualified to pursue the course for which he makes application, and if there is a sufficient number of registrants for the course, he will be enrolled and he will receive the first instruction material. If the applicant is not enrolled he will receive notice to that effect, with the reasons therefor.

In case of an overwhelming demand for enrollment in any particular course it may be necessary to establish a waiting list. In this event, applications will be cared for in the order in which they are received, provided the applicant states that he desires to be placed on the waiting list.

Only one course will be issued to an applicant at a time. A student may be enrolled in an additional course after his satisfactory completion of the course in which he first enrolls, provided that the Knights of Columbus is in a position at that time to continue this service.

Method of instruction.—Text material: Text material for Knights of Columbus correspondence courses will be issued, depending upon the nature of the course, in one of three forms: As a complete text, covering the entire course, to be sent to the student when he enrolls; in pamphlet form, the successive pamphlets in the series constituting the complete text for the course to be issued in sequence to the student as he progresses; in typewritten or mimeographed form, to be issued in the same way as pamphlets.

Lesson assignments: Courses are divided into lessons or assignments, the number depending upon the nature and length of the course. Each assignment is accompanied by necessary instruction sheets supplementing the text and outlining the work to the student, and by blank forms for the student's report.

When a student enrolls he receives the first three assignments. After study of the text in accordance with instructions, he prepares his report upon the first assignment and mails it to the Knights of Columbus Educational Bureau at New Haven, Conn. This report is then referred to an examiner for correction and criticism, and it is returned to the student, together with the fourth assignment and supplementary material. In like manner the student receives the fifth assignment when his second corrected report is returned to him, and so on until he has completed the course. By this method the student is always in possession of material for study, and there is no break in the continuity of his work.

Grades and certificates.—Students' reports will be graded by examiners as excellent, very good, good, fair, or unsatisfactory, and a record of these grades will be kept in the office of the educational bureau. Certificates will be awarded to students upon satisfactory completion of courses.

Cost to the student.—No charges or fees will be required except as indicated below:

Postage: Every student will be required to pay the postage on his reports and other communications addressed by him to the New Haven office.

Texts: A student enrolled in a course for which it is necessary to issue a complete text at the outset will be required to make a deposit in advance covering the cost of the text. This deposit is returnable to him upon his completion of the course. In no event is a text so issued returnable to the Knights of Columbus, and in no case will a deposit be returned unless the student completes the course. No deposit will be required for text material issued in installments.

Equipment: A student in a course for which special technical equipment is required will be expected to furnish it himself. The educational bureau will, upon request, arrange to supply such equipment at the lowest possible price. A student desiring to take advantage of this opportunity will be expected to forward in advance an amount covering the cost of the equipment needed.

Time limit.—The maximum time allowance for the completion of any course will be one year. Most of the courses ought to be completed in a shorter period, and students are therefore urged to pursue their studies with regularity and with reasonable dispatch. If an enrolled student fails to submit lesson reports for a period of two months and does not reply to letters of inquiry from the educational bureau, he will be dropped from membership.

On December 31, 1922, the total number of students actually enrolled in our correspondence courses was 10,340. These students come from every State in the Union, and from the farm as well as from the small town and large city.

CONCLUSION.

From a reading of this report, it will be clear that the Knights of Columbus has for the past four years been conducting an educational system for former service men which is unique. The funds for the maintenance of these schools, as has been indicated before, formed the residue of the war fund.

Over 200,000 young men have been enrolled and have taken systematic instruction in some course in our evening schools; and 403 young men have taken advantage of our scholarship courses in representative American colleges and universities; and to date over 10,000 young men have enrolled and are taking instruction in our correspondence school. The order has felt all along that it is making a wise and judicious use of the money left in its hands at the close of the war, and it has received abundant testimonials from the American public at large that this plan has received indorsement and approval.

CHAPTER XXVIII.

EDUCATIONAL WORK OF THE YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

By Education and Research Division, National Board of Y. W. C. A.

CONTENTS.—What differentiates Y. W. C. A. schools and classes—Organized schools in city associations—Educational methods other than organized schools and classes—Work among the foreign born—Branches for colored girls—Indian work—National aspects.

Of the educational work of the Young Women's Christian Associations only a part is done in the educational departments. The whole association is an educational project. For specific pieces of education, it organizes educational committees and departments in those associations that are large enough, and classes in those that do not maintain departments or need committees. In every association a great deal of work goes on which is directly educational, although not so named, and an ultimately educational purpose underlies every phase of the association's life.

For this reason the following account will include other work than that done in organized classes.

The peculiar field and kind of usefulness of the association schools and classes and the nature of their clientele make their whole plan of organized education necessarily different from the plan in other schools.

WHAT DIFFERENTIATES Y. W. C. A. SCHOOLS AND CLASSES.

1. The object of the associations is to round out the education of each individual, helping her to go on from where she is, and to get what she has not been able to get hitherto or has not hitherto discovered that she needs; and also helping her to want more education than she has and to see what will be valuable to her.

Therefore the associations regard it as their function to help a girl make connections she has not been able to make with the public school, technical school, or other existing agency equipped to give the specific education she needs; if no such agency exists, to form a Young Women's Christian Association class; if the agency exists, but there are girls whose circumstances prevent their taking advantage of it, to make a Young Women's Christian Association adaptation of which they can take advantage. It is not the purpose of the association to duplicate. It is its purpose to supply what is not being supplied, and to provide for people to whom existing supplies are for some reason not available.

There are few of the practical details of daily life in which some girl does not come to the association asking for help. In some of the subjects asked for, instruction can be found elsewhere; in many it is either not given elsewhere or given under conditions that make it not available for the girl asking for it at the Young Women's Christian Association.

2. Young Women's Christian Associations, "in service for all girls" and teaching the whole art of living, must have and are free to have an inclusiveness that no public school and no one private school or technical school would naturally have.

They are free to touch all sides of life, religion being neither barred nor prescribed.

Their attempt is to keep life itself at its highest. Therefore their necessity is to educate motives, to keep all the aspects of education in balance in a girl's mind, and her classes related to everything else in her life, to develop her understanding of what she is about, and clear and develop her purpose, to foster in her thought and feelings concerning everything she does the kind of background which the word "Christian" sums up.

Specific subjects in which classes are formed are of the range suggested above, rapidly varying in response to change in demand, and so diverse as to seem even heterogeneous.

3. It is not the peculiar function of the associations to specialize highly. At the point where specialized expert training becomes necessary to a girl, they would usually refer her to the specialist school in the branch of study she needs, provided there is one within reach equipped for a more professional completeness of training than the Young Women's Christian Association can give. Classes formed by the Young Women's Christian Association are apt to be for beginners, or for people who have not much time to devote. The only specialty it can permit itself is to specialize in consciously directing every one of its kinds of education to the individual's total success in living.

ORGANIZED SCHOOLS IN CITY ASSOCIATIONS.

It is only the larger associations that maintain organized schools. About 40 city associations have them. Among noteworthy ones are those in Cincinnati, Philadelphia, Germantown, Indianapolis, Dallas, San Francisco, Seattle, Brooklyn, New York. Each has its own special kind of interest, the result of the special kind of community whose needs it has tried to meet.

The Ballard School, in New York, now 50 years old, was the first established, and is probably the most highly developed. While in their details the several schools differ as markedly as the cities in

which they have grown up, this one and the school in Harlem branch, New York, may serve as illustrations, showing certain characteristics which all the schools have in common.

The Ballard School.—During the year 1921 there were enrolled in 262 day and evening classes 3,577 students in 46 different subjects. Because many people registered in more classes than one, the total of registration in classes was 5,153. For 1922 the completed figures are not yet available, but will be somewhat higher. About two-thirds of the enrollment is in evening classes.

Some classes meet once a week, some twice, some three times, some daily. Courses vary in length from nine months to a single lesson. New classes start frequently. Most classes, however, begin in September or October and end in December or January, or begin in February and end in May.

Only a few of the teachers give full time. Some are business women, employed or carrying on their own businesses; some are professional women; many teach elsewhere during the day and have evening classes in the Ballard School. Some public-school teachers feel a repaying refreshment in teaching these students who have chosen a course for a definite purpose of self-improvement and care enough for it to pay for it out of their wages.

What girls want.—The secretarial course and the various business classes are taken by many employed girls who are ambitious to fit themselves for better positions and better salaries, using their after-hours time.

English courses are largely for better power of speaking and writing English. A girl is apt to take them because she wants to increase her employer's confidence in her intelligence and be trusted with more responsibility.

Elocution, dramatics, and public speaking are often chosen for a like reason. Some girls are attracted by the name elocution because they want a way of self-expression, some because they want a parlor "stunt" and do not play or sing. Some want to overcome timidity, get voice drill, learn how to stand and how to enter a room. Often one who has had an increase in her wages comes in to say she lays it to the increased self-confidence these courses gave her.

A class listed as in "social usage" came from the remarkable popularity of books on etiquette in the library. The librarian noticed their thumb-worn state, and the school introduced a course.

A course in tea-room management consists of three months of intensive training in the school and six months of practical experience in several cooperating lunch rooms, tea rooms, and cafeterias. The training in the school includes buying, menu planning for a balanced diet, serving, and the training of waitresses, problems of preparing meals for large groups, arithmetic, bookkeeping and accounting,

commercial methods, trips to markets and factories, institution management. The six months' laboratory training includes three months of actual work in a lunch or tea room or cafeteria, with one week in each of its positions in turn—cooking, cleaning, waiting, buying, etc.; then three months in another place with different conditions. Graduates of the class easily find positions; a number open their own tea rooms. The school advises them to act as assistants for a year before going into business for themselves.

The "trained attendants" course is made on the same plan—three months of intensive training in the school and six months in one of three hospitals with which alliance has been made. The Ballard School guarantees to the hospital the preliminary work; the hospital guarantees the six months' practice to the Ballard School. The whole is under State supervision.

Requests for courses, by mail and telephone as well as in person, are frequent. All are filed, and when there have been enough requests to justify it, and they are not being met elsewhere, a class is planned and the askers notified.

Why girls come.—Classes are kept small. They can have, therefore, an intimacy and an individual helpfulness that larger classes can not have and some girls can not do without.

Courses are flexible. They are less prearranged than planned to fit needs as needs disclose themselves.

Because there is no overhead in rent and because professional women will often for motives of service take pupils at the Young Women's Christian Association for a fraction of what they charge their pupils outside, girls can get what they could not afford elsewhere.

The "School of Opportunity," Harlem Branch, New York.—Much more than the Ballard School, the Harlem Branch School plans for girls of less than high-school education.

Its courses try to meet girls where they are, no matter where they are, and to give them opportunity to get ahead from that point. It has among its students employed girls who have left school early to go to work and are ambitious for more education because their work has shown them specific needs for it; younger girls whose parents send them to the Young Women's Christian Association school in the hope that its atmosphere and its intimate individual attention will get a hold on them that the public school with its larger classes has not been able to get; older girls and married women who in the late twenties, the thirties, and the early forties find themselves in need of preparation for making a living or a better living, or have grown tired of economic dependency, or turn to some sort of study or craft because they begin to find life insufficiently interesting. These are not all the types by any means, but these are some.

In response to many inquiries, a four months' course in "Scientific treatment of hair and skin" is offered. Most of the girls who take it want it as a way of making a living. Besides technique, the teacher of the class gives the girls much instruction about the kind of people they will meet, how to meet them, courtesy, personal standards. Some 14 people who have taken the course have opened shops of their own.

The course in domestic arts is taken much more for home service than for commercial use.

Cooking courses decrease in popularity. This is perhaps due to the increasing apartment and cafeteria method of city life. Therefore, as in the Ballard School, the cooking course now consists of a series of "demonstrations," each independent of the rest.

The "costume design" class has in it a professional designer who wants new ideas for her work, and dressmakers who want to improve the quality of theirs, as well as beginners. It is used largely for training for the commercial field.

The "interior decorating" course is used as a home-making course, not for trade purposes.

The music courses are chosen by girls who want them for their own joy.

The fine arts course is chosen for both purposes. A girl whose employment was etching on silver was enrolled in a typewriting class and disliked it heartily. She said she entered it because stenographers could earn bigger salaries than hers. The director of the school suggested the fine arts course instead, as a way of increasing her value and therefore her salary in the work she really enjoyed. She began taking original designs to her employer, and her salary went up.

These are a few details, rapidly chosen. Many other things are being done, both in these two schools and in the others scattered through the United States.

Other school and classes.—Cincinnati offers classes in parliamentary law, human progress in industry, citizenship (given under the auspices of the League of Women Voters and including lectures on different forms of city government; history of present political parties; primaries; and similar subjects). Others of the many courses are art talks, with trips to the art museum; instruction in poster making and design; story-telling; "Christian fundamentals."

Philadelphia has, among other classes not already mentioned in other schools, classes in rug making, basketry, musical appreciation, French, Spanish, Italian, "insistent problems of democracy," nature study, gardening, automobile mechanics, first aid, American litera-

ture. It has a Woman's Forum, discussing "The real woman of to-day" in her various relations.

Akron, Ohio, has an interesting Bible course made up of six lectures by the Jewish rabbi, one each by leading ministers of the Christian churches, and one by some notable woman of the community.

The following account is of work going on in Indianapolis:

About seven or eight years ago a number of neighborhood Bible classes were organized by the religious education department of the Indianapolis Association. As time went on, however, the association rather lost touch with these classes, although they still called themselves Young Women's Christian Association classes. One year ago this fall we decided that we should undertake to ally them more closely with us. We devoted a good deal of attention to this, and as a result our Bible classes for the year 1920-21 had a total enrollment of 624. This fall we have carried on this same policy, and have organized two new Bible classes among nurses at hospitals. The "Wednesday Afternoon Club" is a literary club which asked the Young Women's Christian Association to furnish them a Bible teacher to give a half-hour lesson at each of their meetings.

In our general education department we have been feeling more and more that the field for night classes is being taken over by other agencies. A phase of educational work which we decided might be of great benefit was to offer open forums on different subjects of current interest and importance. Last year we offered four of these. We started with a course of psychology in an attempt to stem the tide of "fake" psychologists that have been flooding the country. The extension division of Indiana University cooperated with us by paying one of their professors to give his time. Our attendance for the three discussions totaled 1,000. The other courses given were one on "eugenics," under a doctor connected with the Indiana University School of Medicine; one on the "Proceedings of the Washington Conference," by a current events specialist; and another on "World problems and their Christian solution," by a secretary connected with the Federal Council of Churches. As would be expected, the psychology was by far the most popular, and the eugenics next. The character of the audiences was most interesting, and the discussions which followed the leader's talks were thoroughly worth while. We have been very happy to see how many young men and women have come in for these short courses.

We are carrying out the same policy this year. We have had one course of three talks on industrial relations, another on eugenics. We are planning a short course on evolution, with three men as leaders; a doctor to discuss evolution in biology, a sociology professor from Butler College to discuss evolution in sociology, and the dean of our college of missions to discuss evolution in religion. We are sincerely hoping that by this means we may have some part in giving the proper trend to public opinion in our community.

The educational work in the industrial department has been wonderfully successful this fall. This has been largely due to the fact that the girls have helped definitely in the planning of their class work. Practically every girl who has been present at their weekly supper meeting on Wednesday night has been a member of a class following the supper. They have also done definite educational work through the open-forum half hour. Some of the subjects discussed are "A Christian conscience in industry," "Choosing a vocation," "The cartoonist." Classes during this first term have been Bride's Hope Chest, gym-

nasium, leadership, swimming, charm class. The Bride's Hope Chest class was really a class in novelty art. The girls have done beautiful hand sewing, enameling, have made flowers, etc. The leadership class was taught by the president of our board of directors. The girls in this class have been the officers of the various clubs. The charm class was very popular and very successful. A different leader on each evening presented the various phases of charm: "How to be charming in appearance," "How to be charming in manner," "How to be charming in public," "How to be charming as a hostess," "How to be charming with men," "How to be charming oneself." The Bride's Hope Chest will be followed this next term by a class relating to sex questions; the leadership class by a Bible class, and the charm class by a study of community questions and problems under men from the chamber of commerce.

The following account of the "Charm School" is from the Chicago Industrial Service Center, where the idea originated:

Our Charm School course was made to fit the needs and requests of the girls and has been largely in the form of discussion, with someone each time to draw out the girls and conduct the talk, making it as informal as possible. We have been very fortunate in getting volunteers who are fine in this, as it takes tact and understanding to keep it from being superficial. We have stressed the development of each individual's personality and the charm in being natural. The following gives a general idea of our course:

1. What underlies charm and friendship? What is personality?
2. Charm in the home—toward members of one's family.
3. Table etiquette—(we served a four-course dinner, using all necessary silver, china, table decorations, place cards.)
4. Charm in conversation—development of the mind, reading good books, keeping posted.
5. Charm in dress—expression of individuality, right use of colors, proper dress for all locations.
6. Interior decorating—making a home attractive and beautiful, though simply furnished.
7. Spiritual charm.
8. A general talk on charm, bringing together all the former points.

EDUCATIONAL METHODS OTHER THAN ORGANIZED SCHOOLS AND CLASSES.

It is probably generally true that the trend is not toward more classes but toward educational work through club programs and through all association projects. In the towns and open country classes are fewer in number than in the larger city associations, but the Young Women's Christian Association has instead a range of opportunities characteristic of rural communities and not open in cities and larger towns. Community cooperation is very much wider, showing itself in canning clubs, fairs, granges, the farm and home bureau, church organizations, and the many other ways of group interchange of thought and experience fostered by Government and local agencies and shared in by the whole community. The educational program of the association tends to be carried by clubs and by community gatherings.

Lectures.—In both rural communities and cities, lectures offered by the Young Women's Christian Association are of two kinds:

1. Important speakers from outside are brought in and sponsored by the Young Women's Christian Associations.

2. Lectures on literature, art, music, or some special problem like interior decorating, or some current interest in economic affairs or national or world politics, are given by local specialists.

Music.—In many places the Young Women's Christian Association adds to the musical opportunities of the community by arranging for musical events, either single or in series, either by local musicians or by people brought from other cities.

Directed visitation.—An increasing number of associations are sending groups of girls with a guide to visit museums, newspaper offices, factories, courts, and other places of local interest, and to plays and concerts.

Forums.—The forum has become an established method of education. Subjects are often Christian citizenship and the problems of international relations, often questions of the industrial world.

Clubs.—The club has come to be probably the most important of organized program groups. Out of it classes often grow. Often as a club with a leader a group of girls will carry on a piece of study as serious and sustained and as fruitful in results as class study. The club is a means of education characteristic of the Young Women's Christian Association; clubs are a feature of every type of association from the largest city association to the county organization in the smallest and most thinly scattered rural communities; they unite groups of all types, environments, and ages, and for a wide variety of purposes.

Three main kinds of clubs will be spoken of here—Industrial Clubs, Business Girls' Clubs, and Girl Reserves.

Industrial clubs.—It is one of the fundamentals in the working theory of the industrial department that the club is an educational method. For some girls it is the only educational means the association can expect to make useful. For others, it is the avenue of approach through which a self-educating ambition is awakened.

The educational value in being a member of a club is of two kinds:

1. The training which comes from the very fact of membership in a group. A girl learns to subordinate personal desires to things which are for the good of the whole; learns poise through speaking, making reports, and presiding; learns how to state things clearly through giving written or oral reports of committee work. The business may be something that seems to an outsider very unimportant, and yet girls sometimes develop wonderfully because of this experience. In a new group contemplating organization, especially if it has no

girls who have ever been members of groups, the helplessness with which they face such simple matters as motions, discovering the will of the majority, etc., indicates how necessary this sort of training is for women who are to take their part in citizenship.

2. The education which comes through activities. In recreational activities it may be a matter of taking responsibility and of finding resources. The educational value in dramatics will be spoken of by itself below. Service activities give a real opportunity. A group which undertook to take care of a family during a winter worked with a number of agencies, including the Red Cross, the clinic of one of the hospitals, and the International Institute. They read the case history of the family, planned their buying in accordance with the diet list furnished by the hospital, and checked up with the case worker of the Red Cross after their visits. They learned a great deal, not only about good judgment in managing practical family affairs but about community agencies for social service.

Classes come as a result of expressed desires of the groups themselves. For a long time, for instance, association workers in the industrial department wished to have classes in economics, history, etc. One of the girls went to the Bryn Mawr summer school for industrial women. When she came back to her own association she made a speech in which she told the girls why they needed to study economics. It was more effective promotion than could have been done by any one else. There is a widespread interest now, and in many cities throughout the United States the industrial departments are having classes in economics and related subjects. There are many other classes, of course—history, literature, a few in psychology, a good many in handicraft, many in music, interest also in sewing and millinery. Most of the people who are having a chance to experiment in teaching these classes are finding it a very interesting and rewarding job, calling for much originality and resourcefulness.

The club gives many an opening for awaking the desire and demand for further education. The industrial department is interested in preparing girls to make use of such special opportunities as have been offered by Bryn Mawr and Antioch College, and of opportunities which present themselves in schools of their own communities. In many industrial departments there are competitions, with awards, for groups having the greatest number of girls in educational classes either within or without the association.

Business women's clubs.—The members here are apt to have a strong consciousness, either awake or readily awakened, of citizenship in the community and responsibility for influencing community well-being. The following are illustrative of programs

carried out by business women's clubs, some of them merely individualistic, some showing the sense of responsible and interested citizenship, some the desire to keep abreast of present-day thinking:

1. Citizenship courses: open-forum courses, in which pending bills, both State and National, are explained and discussed, personal responsibility for intelligent action regarding them being stressed.
2. Presentation of platforms at the time an election is pending: an evening's program includes a statement by a representative of each party.
3. Examination and discussion of community taxes.
4. "What" and "Why" courses: presentation and discussion of national and international questions.
5. Business conduct courses.
6. "Do you know your community?"
7. Economics.
8. Practical psychology lectures, as substitutes for harmful and popular character-analysis lectures.
9. "Customs and courtesies" class.
10. "The ways in which we are alike"; an international forum, to counteract the usual and unchristian assumption that our own ways, being different, are superior.

Girl reserves.—The educational purpose of the Girl Reserve Club is different at its starting point from that of the clubs of older girls. The Girl Reserves are school girls. The purpose of the Young Women's Christian Association in establishing and directing clubs among them is to educate in standards of life, to widen interests, to meet the vivid demand of the quick-pulsed 'teens for something to *do*, to train through activities, to supply good nourishment to the sudden hunger for extra-curricular information and experience that are forever budding overnight in adolescence. A club may turn its energies into any one of a number of channels, or into a number by turns. The business of the club leaders is to see that each member the club is really supplementing the education she is getting elsewhere, and helping to give all the varied occupations and interests of her year a growing unification, significance, balance, adequacy.

"The Girl Reserve Movement, a Manual for Advisers," first published by the national board of the Young Women's Christian Association in September, 1918, and last revised in June, 1921, states the theory of the movement and presents a mass of suggested material for use in planning club programs. These are a few among the suggested lines of study and activity:

Handicraft: Leather work, wood block printing, batik work, tie-dyeing, sealing-wax craft, pottery, making recipe books, making dollhouses and furniture, boxcraft.

Collections.**Story-telling.**

Discussions: Concrete questions of personal conduct, and questions involving the practical working of theoretical ideals and standards; questions of citizenship and public morals; topics of current interest.

Civic information.

Thrift, personal and civic; keeping a personal expense account, budgeting expenses, budgeting time; study of the city expense account and the city budget. What becomes of the city junk? Relation of city clean-ups and city thrift. Investing; Government securities and other securities.

Business ideals, principles, details. Acquaintance with common business terms. How to handle checks and deal with a bank.

Vocational information. How to choose a vocation. What you need to know about yourself; what you need to know about the occupation. Local occupational information, educational opportunities, placement bureaus.

Music.

Service. The principle underlying is that the girls should choose for themselves some kindness they can do as a club which is really worth doing, interesting to them and within their powers, and at hand to be done.

Camps.—A place for summer camps has come to be a part of the equipment either owned or looked forward to in almost all associations. They are used for vacations, and also for week-ends. The plan of them is a brisk, vigorous, orderly life out of doors, in which there is some room for solitude and plenty for companioned activity.

Teaching a girl how to enjoy camp life is an end in itself. The best camps are organized with the purpose of teaching also some principles of hygiene through the daily camp routine, of diet through the carefully planned camp meals, of citizenship through a community life in which everybody cooperates in a mutual helpfulness. From sharing in everything that is done, the campers learn woodland handiness and resourcefulness. Practically every camp, both national and local, has nature study, interpretive dancing, and community singing as part of its educational program. Most of them have some form of the study of the Bible.

Pageantry and dramatics.—Pageants are being used in many associations as a means of getting an idea or an idealistic conception to take effective hold of people's minds. They are planned by the participants, who start with an idea, not a scenario, and themselves work out all details of translating the abstract into picture and action, into color, music, and movement. The purpose is at least as

much the education that comes through planning as the success of the production. For the givers, the pageant has the educational value of cooperative effort toward a common end, the discussion that is necessary before ideas can be vividly enough grasped to be put into action, and the release of artistic expression. For the audience, a pageant has the value of the graphic presentation of truth.

In Washington, D. C., in honor of the International Congress of Working Women, the girls in the Government service presented the aims of that congress in a pageant whose subject was "The Spirit of Industry and Her Problems in Relation to International Understanding." Each rehearsal brought up discussions of such questions as long hours and inadequate pay, and the causes of discontent in industry.

In Des Moines, Iowa, a thousand girls presented in a pageant the ideal of understanding between nations. The personages of the pageant were Our Lands, Many Lands, Many Differences, and so on. With the help of Service, Many Differences were transformed from separating influences to influences for mutual interest and helpfulness; they became Inspiration. The rehearsals, of course, demanded much discussion of what constituted Many Differences between the girls of Our Lands and the girls of Many Lands, since these as well as the transformation must be made self-evident in color, action, expression.

This pageant has been produced twelve times in different sections throughout the country, with casts numbering 75 to 2,000 people. The aim has been not professional production but to increase the opportunities for individual art expression and to develop taste and discrimination in the appreciation of professional productions.

In a health carnival given in Boston girls from eight colleges cooperated to express in picture form the idea of the use of spare time for health.

Individual tutoring; individual adjustments.—The type of work done in the public schools of our average cities can not take into consideration the specialized adult. It is part of the association's work to give just this help. A typical case is that of the young Canadian woman of 35 who, because of her isolation in a farm community, had forgotten what little her few months of schooling had taught her of reading and writing. The night schools provided only for the non-English speaking or the mentally slow, and this young woman was able to do far more rapid work. She was sent by the public school to the Young Women's Christian Association and for three months given special tutoring which prepared her to go on into the seventh and eighth grade work.

In most cities of large population a large proportion of the time of the educational director and her staff is taken up in talking with

girls who wish to register for classes, finding out their background of education, their purpose, and whether their need can better be met by some other educational institution in the community than the Young Women's Christian Association. During the unemployment of the last two years this has been done in several places in connection with the mayor's committee on unemployment. In general the Young Women's Christian Association does not claim to be an expert vocational guidance agency, but it has been felt by the vocational guidance experts of the country that it is invaluable in the personal adjustment necessary in linking a girl either with the vocational forces of the city or with some definite educational institution like a business college or the city junior college.

WORK AMONG THE FOREIGN BORN.

Educational work for foreign-born women by the Young Women's Christian Association began many years ago when young German and Scandinavian women began to pour into associations for help on personal problems and with requests for English teachers. When immigration of other non-English speaking groups brought still other types the problems became acute. Secretaries were not trained to know the backgrounds and thinking of these young women, to say nothing of their languages. They could only vaguely try to serve their needs. The national board therefore some 13 years ago employed a secretary whose special work it should be to study the needs of foreign-born women coming to associations.

International institutes.—The result was the creation of International Institutes, branches of local Young Women's Christian Associations, having as executives American women understanding both foreign-born people and American institutions, and having associated staffs of nationality workers representing those nationalities living in the city where the institute is located. The executive thus became the interpreter of foreign-born women to America and the nationality staffs became interpreters of America to foreign-born women. There are now 50 international institutes.

An international institute provides protection, study, and play for foreign-born women. Its educational philosophy is therefore only a part of its general philosophy. It is first of all social in conception. Whatever education helps these women to become better and happier members of society is worth while. It has never been thought of as Americanization work. It was grounded years before the Americanization wave. The foreign-born woman is a potential citizen, but she faces many handicaps in her preparation for citizenship, and international institutes work to befriend her so that in spite of the handicaps placed in her way she may still love America sufficiently to want to share in its civic life.

Classes.—About 9,000 foreign-born women of 33 nationalities attended classes last year. These include English and such subjects as sewing, cooking, and other home-making courses. International institutes in cities having public-school extension-classes in English recruited and made attendance calls upon over a thousand women for such classes. Classes were formed in several cities for first-aid and home-nursing courses under Red Cross instruction, the interpreting being done by the nationality workers of the international institutes.

English is taught by methods sufficiently eclectic to embrace all others, even including translation when that seems most economical.

Other subjects are taught in English in so far as possible, but since the international institutes exist for non-English speaking women primarily it is more frequently necessary to teach such subjects in the tongue of the woman's understanding or through an interpreter. It is better for America that the new arrival be taught the city garbage regulations in Polish or Syrian than that she be permitted to live in ignorance of them for several years while she is learning to repeat the preamble of the Constitution in English.

Clubs.—Over 7,000 women formed international institute clubs last year. These were self-governing in so far as the experience of the group made self-government possible. They bear such names as Ameritalia, a poetic combination of America and Italy. One such club, called the Italian Mothers' Industrial Club, possessed almost 100 members. They learned new songs and games as well as laughing their way through old ones. At the time when they can be best understood songs in English are taught.

Formal musical evenings and informal folk singing are both used as program features. The enrichment of American life through folk song of other nationalities is frankly recognized.

The folk festival has possibilities practically untouched by the country at large. Demonstrations of these possibilities are being made in international institutes. Last Christmas a festival evolved from Christmas customs was organized and produced by the clubs of the Monongahela Valley, (Pa. Formal pageantry is not used, the aim being to help release the spirit of wonder and beauty inherent in racial groups rather than to exploit their gifts for the sake of program.

Short talks to clubs by children's doctors or by specialists, talks by school or other city officials, and by interesting visitors from other communities are frequently given.

Visits to public libraries, to markets, to parks, to the post-office, to museums, to public schools, to the homes of American women by invitation, occur frequently. Through the cooperation of the

Carnegie Art Museum in Pittsburgh groups learned of the treasures deposited there as witnesses of the greatness of the lands from which they came.

Clubs and classes unite at intervals in the conduct of organized exhibits, colorful bazaars, creative folk festivals. Whatever is lovely in the inheritance of these groups they are helped to preserve.

Summer picnics bring to light the longing of foreign-born women to escape the bondage of the city for the beauty of the country. A young woman, American born of Hungarian parentage, having her first spring day in the country, said, "It is good to travel. I can never again say I haven't seen apple blossoms." These country rides or picnics help the girls and women to know that America is not altogether made of brick and mortar topped by smokestacks, but that it is indeed a beautiful land.

Employment problems are met constantly and vocational advice is given when it can be wisely. Scholarships are obtained and ways for earning expenses found for ambitious young women craving specialized or more advanced training.

National promotion.—The international institutes are the local agencies; their resource for policy and material is the department for work with foreign-born women of the national board of the Young Women's Christian Associations. This staff furnishes information on citizenship legislation, pending and past, particularly as it affects foreign-born women. It maintains bibliographies of texts for teaching English and citizenship. It advises the encouragement of public schools to arrange for English teaching on a sufficiently flexible basis to reach small groups of foreign-born women. In order to put its national experience at the disposal of local public schools, a pamphlet called "The Teaching of English and the Foreign-Born Woman" was prepared by this department and is obtainable from The Woman's Press. The Foreign-Born Bulletin, recently suspended, has carried to the international institutes educational information, news, and stimulating articles on English and citizenship.

A translation bureau has published articles of interest to foreign-born women in foreign-language papers. Pamphlets to help in the adaptation to American life have been issued in foreign languages. These include "Why Foreign-Born Women Should Learn English" (in 10 languages), "What America Has for You" (in 7 languages), "The Baby" (in 4 languages), "Courts of Law and Their Use" (in 13 languages), and others. These are distributed free to any agency working with foreign-born women as well as to international institutes. This bureau also maintains a classified bibliography of foreign-language material issued by other organizations. It trans-

lates program material for international institutes from the foreign language into English or from English into the foreign language. It has furnished translators for several international conferences.

Training courses are arranged in cooperation with the National Training School of the Young Women's Christian Association for the special preparation of international institute workers. Emphasis is laid upon knowledge of the backgrounds of foreign-born peoples. Bibliographies of background material have been maintained and at present a Handbook of Racial and Nationality Backgrounds is being published in six sections by The Woman's Press.

A collection of folk songs has been made from the treasures of song brought to the United States by the peoples of the world. These have had the translations worked out cooperatively by foreign-born people and the best contemporary poets. Such musicians as Rachmaninoff and such poets as Edwin Markham have lent their services in thus releasing to English-speaking groups another heritage of foreign-born women. These songs are issued in two volumes called "Folk Songs of Many Lands." A special collection of the Christmas carols they contain has been issued in pamphlet form, and the words of a few of them are issued in a pamphlet called "Conference Songs," for community singing. All of these are published by The Woman's Press.

Brief surveys of community educational facilities for foreign-born women have been made in all cities having international institutes.

A collection of pamphlets, maps, and books in this department has been used by students of Columbia University in preparing theses, by Vassar College debaters, and by others interested in this field.

BRANCHES FOR COLORED GIRLS.

To describe in detail the classes, clubs, and other educational opportunities of the colored branches would be to repeat what has already been said of the branches for white girls. The clear intent underlying the colored work, however, should be spoken of.

Committees on colored work are interracial. They are advisory, not supervisory. The management of each branch is by the colored women themselves. The staff at the national headquarters is made up of colored women.

Because of the need of colored leadership, the efforts of the national board staff are to help definitely in its development. Avenues which were closed to the Negro before the war have been opened. Great effort must be made to equip him to keep what has already been obtained and to make good in new ventures. A social consciousness has awakened in the race. An obligation to citizenship is realized and an effort made to meet it. Greater educational op-

portunities are opening to the colored girl. Well-equipped leaders are needed in every one of these directions to guide the progress of the race.

Therefore the present need of the Young Women's Christian Association is:

1. To give opportunity for self-expression through its programs.

The younger-girl movement has already shown the greatest usefulness in helping this girl who finds her contacts so limited. The standards and goals set her are being met by the young colored Girl Reserve, and the influence is felt not only in her life but in the life of the community.

Clubs for older employed girls make greater contentment and make possible a closer preparation for an active life.

Among the older women-matured and practical thinking is developed through committee action and volunteer service.

2. To direct the natural religious tendencies of the colored race and conserve the spiritual strength which comes through having suffered.

This generation inherits these tendencies, but in this time of uncertainty and change a realization and assurance of their spiritual power must be maintained for themselves and their posterity, to free them to make their contribution to the world in the quest for a natural spiritual basis of fellowship and understanding.

3. To strengthen the faith of the present colored generation in the white group, and to help all groups, white and colored, to be open-minded as to the facts confronting the colored girl and woman.

4. To give opportunity for free and frank discussion without bitterness.

INDIAN WORK.

This is being done partly in the Government and mission schools, partly among the girls at home on the reservations. Two Young Women's Christian Association workers on the reservations are Miss Susie Meek, of the Sac and Fox Tribe, and Miss Ella Deloria, a Sioux, daughter of a native Indian pastor in South Dakota. Both are college graduates. The work these two young women are doing is a source of special satisfaction to the Young Women's Christian Association because it has been a part of the purpose from the beginning to help develop native leaders by whom the work for their race can be carried on.

The "Indian School Bulletin" is a special adaptation of material prepared for college associations, and for the Girl Reserves. It is sent semiannually to the associations in the Indian schools. Its purpose is to give the Indian girl student the awakening new interests, the idealistic attitude, the beautiful services and ceremonials,

the fine bits of verse and prose expression that are constantly being promulgated among the girls of other associations; especially its purpose is to make the Indian school girls feel themselves completely fellow citizens with other American girls, sharing the same occupations.

A notable part of the Indian work in the last two years has been the program of health education. A physician sent from the bureau of social education of the national board of the Young Women's Christian Association has spent a few days or a week at a time in each of a large number of schools, giving a series of simple talks and advising with the girls individually. As a result of these widespread visits, a piece of intensive work has been done this fall in Haskell Institute, Lawrence, Kans.; 400 girls, from 60 tribes, are at Haskell. Whatever is effectively taught there will spread far. At the request of Mr. Peairs, chief supervisor of education, Office of Indian Affairs, Department of the Interior, the lecturer spoken of above and Miss Deloria have spent a month at Haskell, giving individual health examinations to the girls, teaching them what health means and the habits that develop it, and training the physical director of the school to carry on the same sort of work.

It is the hope that Haskell will be a beginning, and not only will the ideas implanted be carried home by the girls into the 60 tribes they come from, but others of the Indian schools will follow and establish permanent health education departments with health examinations for every girl. Some of the schools may be able to pay for such work out of their own resources.

One value of the examinations, aside from the value to each girl examined, is that they are furnishing scientific information from which useful conclusions can be drawn; for example, conclusions as to dietetics in the schools, and as to the need of care and individual instruction definitely directed against tuberculosis in the race. An accumulation of reliable statistics on such subjects will help toward getting something done.

Indian girls need to be taught how to play, and Indian schools to make provision. Games and recreation were very much a part of the older Indian life. Because early missionary zeal did what the more understanding modern spirit is careful to avoid, discredited everything Indian and tried to supplant it with white men's ideas, many of the older Indians who became Christian connected all play with paganism and came to think there must be something inherently wrong in it. The younger generation rebel against the severity of life that results and look for fun recklessly. So the Young Women's Christian Association worker of the present is trying both to teach the older Indians that social life and playing are desirable, and to teach the younger ones what kind to desire.

NATIONAL ASPECTS.

Thus far this has been chiefly an account of work as it is carried on locally. The remainder will deal with national aspects.

Emphases.—The national board is especially emphasizing—

1. Dynamic health education.
2. Citizenship and internationalism.
3. Intelligent Christianity as the best practical means of solving the complicated difficulties of present-day civilized life.

Health.—Acting primarily through its bureau of social education, the national board is attempting to make a contribution toward the improvement of the health of the coming race by training the present generation of girls to a more dynamic way of thinking about health. It is striving to make a few simple principles take effective hold of the minds of girls and women and issue in habits of action:

1. Health is the means to an end; the end is the radiant sense of well-being, the zest for each new day, the joyous feeling of being equal to anything that may come. Because health is one's best way to happiness, success, and achievement, being in the fullness of health is one's personal privilege and one's social duty.
2. Health is a question of well-functioning emotions as much as a well-functioning body. It is essentially a social matter, concerned with an individual's whole relations with other people and her whole range of interests, activities, and pleasures.
3. Health is responsive to habits—physical habits and also emotional, social, spiritual.
4. Each person's health is her own responsibility. It is only by her own intelligent effort that her health can be developed to its fullest.

With the aid of a traveling staff of physicians and physical directors, the national board has contributed in three ways toward this kind of health education:

1. Conference with local associations, assisting them to enlarge their physical education departments into departments equipped for constructive health education.

Such a department gives individual health examinations as a means of awakening girls to their own possibilities, and teaching them to build the finest health. It teaches individual health-building exercises, and provides openings for a health-creating use of leisure time.

In such health education the association reaches out through its own membership into the community.

2. A series of lectures in colleges, assisting to establish and extend constructive health education there.

8. Community lectures.

During 1921, many "health weeks" were given. A physician and a physical director sent from headquarters gave lectures and demonstrations for Young Women's Christian Association and community gatherings for the purpose of arousing community interest, creating a point of view, and stimulating community action toward a permanent establishment for actively teaching health. In 1922 the method has been more intensive work in a smaller number of places, the physician spending sometimes a month in one place to assist in the study of local conditions and in making a suitable plan for permanent work.

Because recreation is an essential for health, the bureau of social education unites with this work a systematic effort to promote recreation, teach a philosophy of recreation and the habit of playing, and increase opportunities for the kinds of play that are recreative and that give the joy of self-expressive activity.

Citizenship.—Through all clubs and other means of reaching girls' living thought, there is an effort to create an attitude of mind toward life which impels girls to consider their daily conduct as having a relation to the solution of our acute national and world problems.

Law-reporting service.—In establishing this service the national board acted on the belief that legislative activity should be conditioned upon thorough study and understanding of the problems underlying bills and of the contribution offered by the suggested legislative measures to their solution. Its function is to place at the disposal of the national board and of local associations complete and authentic information about bills pending in Congress and in State legislatures.

The service has answered many inquiries as to pending legislation and as to existing laws as they affect girls and women. It has also given out such information without waiting to be asked, by contributing monthly articles to *The Woman's Press* and by making every effort to have all educational material on hand utilized to the fullest extent, both its own material and that prepared by other organizations. It has frequently been called upon by other organizations for legislative information.

Internationalism.—It is the conviction of the foreign division at headquarters that one of the most fruitful causes of race prejudice, international dissension, and war is a lack of knowledge which may be used as a basis for real appreciation and respect. There is always a tendency to dislike and distrust the unknown. The aim of the

association is, therefore, to give to the women and girls of this country accurate, interesting information about other countries, especially emphasizing the best qualities in the civilizations of other people and the peculiar contributions which all have to make to the world.

The Young Women's Christian Association of America has secretaries in 17 different countries. These representatives are constantly sending in to the national board reports not only of their own work, but also about all sorts of conditions that affect women, as well as many stories about individuals with whom they are associated. These reports are one of the sources from which world fellowship education material is drawn.

Courses in internationalism were given in all conferences last year.

World-fellowship committees in local associations promote education in internationalism by means of classes, discussion groups, and other meetings.

There are thousands of girls in the Young Women's Christian Association in America who are actively interested in another country because they are helping to support a secretary in that country.

Interpretation of Christian principles.—The Young Women's Christian Association believes that the principles of Christianity, understood and consistently applied, offer the solution to modern problems, economic and international, as well as the problems of personal life. It conceives of the Christian ideals as effective to the degree in which they are embodied in activities. It makes Christian idealism a fundamental element in all its program.

(1) The association seeks, through its training system and the summer conferences, to help women and girls to a better understanding of how to use the Bible, and to apply its teachings to personal, social, and international life to-day; to increase their knowledge of world conditions that they may share in finding the solution to world problems; to bring them to an increasing realization of the responsibilities of Christian leadership, and to equip them to discharge these responsibilities.

(2) Through stimulation of study, and the production of study material, the association seeks to develop and foster the religious life of women and girls, and to help them to interpret Christianity in terms of social living.

(3) Through its cooperation with other national Christian movements, especially the organizations of the Christian Church, the Young Women's Christian Association seeks to make a contribution to all efforts to increase and strengthen religious education and Christian experience.

Summer conferences.—The summer conferences of the Young Women's Christian Association, attended each year by more than

10,000 girls and women, are probably the greatest unifying force within the association. The understanding which the woman of leisure gains of the life and problems of the girl in industry, and which the student gains of the life of the woman who works, are genuine educational experiences. The presence of girls of foreign parentage, and of students from the Orient and Europe, add greatly to the understanding of other parts of the world. Summer conferences are provided for students, for younger girls, for industrial girls, and for the girls and women of city, town, and country communities. The attendance varies from 50 to 700.

The summer conference brings association members together for 10 days of intercourse and exchange of experience. The days include Bible and world fellowship courses, discussion groups, technical councils, forums, hours for play, hikes and trips, time for folk-song and story-telling, nature study and pageantry, inspiring addresses, and services of worship. They are balanced days of fun and good fellowship, hard thinking and quiet communion. Underneath all is the great common purpose—the search for reality, the finding of the God of life, and the uniting of life with His.

National Training —From another aspect the national board carries on an educational work. Within its own movement a definite profession for women has developed and is now fast being recognized as a standardized profession meeting the usual requirements for professional recognition, a considerable period of special preparation, a definite professional status, eligibility to membership in professional societies, a position of responsibility in and to the community, and the practice of the profession as a permanent calling providing an adequate livelihood.

The National Training School maintained at headquarters is a professional school of graduate type. It trains character builders.

Five groups of courses are offered:

(1) Biblical Literature and Interpretation, under which is included all Bible work; (2) History and Philosophy of Religion, which includes church history, comparative study of religions, philosophy of early faiths, and philosophy of Christian belief; (3) Religious Education, including the physiological and psychological approach in the development of personality and the psychology of Christian experience; (4) Industrial and Social History, which includes economic and social history and industrial problems; (5) Association Leadership and Technique. This includes the history and philosophy of our own movement, its various techniques, and its psychology of group leadership.

The certificate of the training school is not given upon academic work alone but must be either preceded or succeeded by one year's

successful work as an employed officer in the Young Women's Christian Association.

Student-industrial cooperation.—An illustration of projects initiated at the national headquarters or in the biennial convention and nationally promoted is the movement for an interchange between student and industrial clubs. College girls, members of student associations, meet regularly with industrial groups, the student acting as leader in a study course or discussion group in which she can pass on what she is getting in her college classes, and the industrial girl giving in return the first-hand acquaintance with social and economic conditions which the college girl is deprived of by her somewhat limiting environment. Both groups have found the exchange a valuable source of information and stimulus to thinking.

Publications.—Books published by The Woman's Press in the main have to do with raising the level of intelligent opinion on the part of women toward the problems of our times. (An example is Maud Royden's "Women at the World's Cross-roads.")

The publishing program includes also technical publications, as for instance, books having to do with recreation, health, and so forth; and books on modes of life of women in other lands. ("Folk Songs of Many Peoples.") The technical publications are the tools furnished to associations and secretaries.

The magazine "The Woman's Press" is a monthly publication which is not only the national tool or organ of the movement but is also an opinion-making periodical which has its own Christian international point of view not duplicating any other woman's magazine.

Cooperation with other organizations.—This includes such cooperation as in the Bryn Mawr summer school for industrial women; in community pageants and other community efforts; in the Women's Foundation for Health; in the program of health lectures in colleges, spoken of above; in surveys and publications which have been the joint work of specialists from the Young Women's Christian Association and from other organizations. The secretaries in the Indian work, the foreign-born work, the law-reporting service, the industrial department, and on the religious education staff, are among the specialists who have both furnished research material to people interested in various surveys and have themselves made and cooperated in surveys and publications.

The work of the association offers an immense resource for people wishing light on questions dealing with the lives of girls and women. The association has an opportunity for getting facts, knowing conditions, observing situations, which makes it a valuable reservoir of research material frequently tapped by other people.

In conclusion.—The following may perhaps be spoken of as characterizing the national policy of the Young Women's Christian Association in its educational work.

1. The unification of program in the one purpose, more abundant life. All program content, however varying, is definitely made contributory; this purpose is implicit in everything done.

2. Education for leadership in life, by the plan of amateur leadership in association activities. The constant purpose of the employed leaders, the secretaries, is to develop the power of leadership in the members of clubs and of all groups.

3. Pioneering. The national organization tries to find out the things girls and women need that are not being done, to select the ones within its own field, to get them started, and when some one else is ready to take them over, then to give them up and go on to something else that needs starting. A certain amateurishness naturally results from this policy. The group of people specifically organized for a particular piece of work carry it out to ultimate conclusions; the Young Women's Christian Association chooses to be the initiating organization. Its pioneering is often quite lost sight of in a larger growth when it has gone on to pioneering in another field. This it has done in education as in other things.

CHAPTER XXIX.

EDUCATIONAL BOARDS AND FOUNDATIONS.

By HENRY R. EVANS,

Editorial Division, Bureau of Education.

CONTENTS.—General Education Board—Rockefeller Foundation—Carnegie Foundation for the Advancement of Teaching—Jeanes Fund—John F. Slater Fund—Phelps-Stokes Fund.

GENERAL EDUCATION BOARD.

The General Education Board has, since its foundation in 1902, to July 1, 1921, appropriated \$88,125,444.56 for various phases of educational work, \$80,408,344.99 of this having been paid to or set aside for colleges and other institutions for whites, \$5,806,205.62 for institutions for negroes, and \$1,910,893.95 for miscellaneous objects.

The following is a statement of appropriations of the General Education Board for the year ended June 30, 1921 (included in the foregoing paragraph):¹

For whites—Lincoln School, \$1,582,929.73; medical schools, \$11,859,513.25; professors of secondary education, \$46,250; rural school agents, \$84,700.94; State agents for secondary education, \$62,300; universities and colleges, \$18,205,353.50; total, \$31,841,047.42. For negroes—Colleges and schools, \$646,000; county training schools, \$128,000; critic teachers, \$12,000; expenses of special students at summer schools, \$10,000; John F. Slater fund, \$9,000; medical schools, \$170,000; negro rural school fund, \$131,500; rural school agents, \$77,959.11; summer schools, \$28,200; total, \$1,212,659.11. Miscellaneous—American Classical League, \$60,000; Bureau of Educational Measurements, \$15,000; conferences, \$3,000; division of educational relations, \$10,000; educational investigation and research, \$6,000; general survey of educational conditions and needs in Kentucky, \$17,500; general survey of educational conditions and needs in North Carolina, \$1,500; improvement of accounting systems in educational institutions, \$20,000; model county organization, \$2,500; study of distribution of physicians in the United States, \$7,500; total, \$143,000. Grand total, \$33,196,706.53.

Of the above total, \$24,380,156.94 represents appropriated principal and \$8,836,549.59 appropriated income. Of the latter amount, however, \$2,859,777.51 is a charge against income for 1921-22 and

¹ Data compiled from report filed with the Secretary of the Interior by the General Education Board.

subsequent years. In addition, there was appropriated from the income of the Anna T. Jeanes fund for negro rural schools, \$9,775.91.

The income receipts of the General Education Board for the period beginning July 1, 1920, and ended June 30, 1921, were as follows:

Income on principal, \$6,822,473.37; sundry refunds, \$3,374.21; amount originally paid from income but since charged against reserve, \$500,000; total, \$7,325,847.58. There was paid from income on account of appropriations previously made and made during the year for educational purposes, \$6,915,414.43; and for administration expenses, \$139,916.91; total, \$7,055,331.34.

The statement of disbursements of income for educational purposes is as follows: For whites—Colleges and schools: Endowment and general purposes, \$1,032,348.94; to increase teachers' salaries, \$1,852,337.93; Lincoln School, \$373,559.67; medical schools, \$2,409,316.74; professors of secondary education, \$44,828.98; rural school agents, \$80,790.88; State agents for secondary education, \$58,488.27; taxes on Lincoln School property, \$30,140.76. For negroes—Colleges and schools: Endowment and general purposes, \$368,930.53; to increase teachers' salaries, \$195,500; county training schools, \$125,284.55; critic teachers, \$8,310.64; expenses special students at summer schools, \$20,450.58; medical schools, \$20,000; negro rural school fund, \$81,500; rural school agents, \$74,546.29; summer schools, \$25,028.08. Miscellaneous—American Classical League, \$425.78; Bureau of Educational Measurements, \$4,074.06; conferences, \$1,664.14; division of educational relations, \$6,229.10; educational investigation and research, \$10,069.49; general survey of educational conditions and needs in Kentucky, \$41,013.77; general survey of educational conditions and needs in North Carolina, \$3,119.47; model county organization, \$5,150; National Committee on Mathematical Requirements, \$20,384.10; rural school supervision, \$9,292.89; survey for preparation of mental measurements of school children, \$2,244.09; surveys (miscellaneous), \$21,584.82; vocational art survey, \$18,199.88; total, \$6,915,414.43. The board also paid from the principal of its funds during the year for medical education \$1,401,429.04, a total for educational purposes of \$8,316,843.47.

During the year Mr. Rockefeller gave to the board securities which were appraised by the treasurer at the time of their receipt at \$24,906,205.30, with accrued dividends amounting to \$71,296.70, a total value of \$24,977,502. These gifts have been merged with the principal of the other general funds, making a total, including reserve, on June 30, 1921, of \$131,283,782.93, subject, however, to unpaid appropriations from principal as follows: Appropriations to provide endowment for teachers' salaries, \$27,957,000; appropriations to medical schools (\$3,500,000 from reserve), \$16,774,013.90; total,

\$44,731,013.90. Balance of unappropriated principal thus amounts to \$86,552,769.03.

The credit balance to income on June 30, 1921, was \$11,377,587.76, of which \$9,611,169.57 represents appropriations unpaid, not yet payable, leaving unappropriated \$1,766,418.19. There were, however, appropriations from income for special purposes—teachers' salaries, medical education, and other items—chargeable to income accruing after July 1, 1921; amounting to \$4,348,694.51, not included in the above figures.

For the past two years the activities of the general education board in the field of college and university education have been principally concerned with the distribution of Mr. Rockefeller's special gift of \$50,000,000 to aid in the increase of teachers' salaries. Out of this gift, made on December 18, 1919, the appropriations made up to July 1, 1921, amount to \$26,732,000. In addition, appropriations of principal aggregating \$1,225,000 were made to institutions for negroes. Of this sum the appropriations made during the year 1920-21 amount to \$11,525,334 toward the total of \$38,565,000. The figures reported do not include appropriations of principal aggregating \$2,855,000 and annual grants of \$741,400 made July 1, 1920, which were reported in the 1919-20 report. Grants aggregating \$1,803,617 for increasing teachers' salaries over a period of years were made during the year 1920-21.

ROCKEFELLER FOUNDATION.

The activities of the Rockefeller Foundation for the biennium, 1920-1922, are thus stated by Mr. George E. Vincent, president of the foundation:

During the year 1920 the foundation (1) aided six medical schools in Canada; (2) gave a large sum to a medical training center in London; (3) appropriated a million francs for the Queen Elisabeth Foundation for Medical Research in Belgium; (4) agreed to contribute toward the complete rebuilding of the medical school of the University of Brussels; (5) provided American and English medical journals or laboratory supplies for 11 medical schools and medical libraries in five European countries; (6) continued to construct and to maintain in Peking, China, a modern medical school with a premedical department; (7) aided 31 hospitals in China to increase their efficiency in the care of patients and in the further training of doctors and nurses; (8) supported the School of Hygiene and Public Health of the Johns Hopkins University; (9) contributed to the teaching of hygiene in the medical school at São Paulo, Brazil; (10) provided fellowships in public health and medical education for 90 individuals who represented 13 different countries; (11) brought to the United States commissions of medical teachers and hygienists from England, Belgium, and Czechoslovakia; (12) continued to support a campaign against yellow fever in South and Central America and in west Africa; (13) aided Government agencies in the control of malaria in 10 States of the South; (14) prosecuted hookworm work in 9 Southern States and in 18 foreign countries; (15) helped to expand anti-hookworm campaigns into more general health organizations in counties, States, and nations; (16) brought a war-time antituberculosis work in France to the point where it could soon be left

entirely in French hands; (17) assisted the Government of Czechoslovakia to reorganize its public health laboratory system; (18) rendered various services in organizing committees to study the training of nurses and of hospital superintendents, lent experts for conference and counsel, sent officers abroad to study conditions, etc.; (19) brought to a close its participation in war-time emergency relief by giving \$1,000,000 to the fund for European children. These things were done in part by the foundation, but chiefly through its departmental agencies—the international health board, the China medical board, and the division of medical education.

During the year 1921 the Rockefeller Foundation (1) continued a quarter-million annual appropriation to the School of Hygiene and Public Health of Johns Hopkins University; (2) pledged two millions to Harvard for a school of health; (3) contributed to public health training in Czechoslovakia, Brazil, and the United States; (4) aided the Pasteur Institute of Paris to recruit and train personnel; (5) promoted the cause of nurse training in America and Europe; (6) underwrote an experimental pay clinic in the Cornell Medical School; (7) formally opened a complete modern medical school and hospital in Peking; (8) assisted 25 other medical centers in China; (9) promised \$1,000,000 for the medical school of Columbia University; (10) contracted to appropriate three and one half millions for the rebuilding and reorganization of the medical school and hospital of the Free University of Brussels; (11) made surveys of medical schools in Japan, China, the Philippines, Indo-China, Straits Settlements, Siam, India, Syria, and Turkey; (12) supplied American and British medical journals to 112 medical libraries on the Continent; (13) supplemented the laboratory equipment and supplies of five medical schools in central Europe; (14) defrayed the expenses of commissions from Great Britain, Belgium, Serbia, and Brazil; (15) provided 157 fellowships in hygiene, medicine, physics, and chemistry to representatives of 18 countries; (16) continued a campaign against yellow fever in Mexico, Central and South America; (17) prosecuted demonstrations in the control of malaria in 10 States; (18) cooperated in hookworm work in 19 governmental areas; (19) participated in rural health demonstrations in 77 American counties and in Brazil; (20) neared the goal of transferring to French agencies an antituberculosis organization in France; (21) provided experts in medical education and public health for counsel and surveys in many parts of the world; and rendered sundry minor services to governments and voluntary societies. These things were done in part by the foundation directly but chiefly through its departmental agencies—the international health board, the China medical board, and the division of medical education.

CARNEGIE FOUNDATION.

The Carnegie Foundation for the Advancement of Teaching, in its report for the year ending June 30, 1921, further develops the foundation's plan of insurance and annuities and continues without abatement its general study of pension systems. During the year the trust received for general purposes a total income of \$1,556,641.76—in addition to \$50,596.63 from the endowment of the division of educational inquiry—\$756,641.76 from the general endowment, and \$800,000 from the Carnegie Corporation of New York on account of its appropriations of \$200,000 a year for 5 years and \$600,000 a year for 10 years. The current expenditures were as follows: (a) General endowment—Retiring allowances and pensions in institutions on the associated list, \$844,724.56; retiring allowances and pensions granted to individuals, \$111,537.48; total retiring allow-

ances, \$956,262.04. Expenses of administration, \$80,282.17; publication, \$5,773.01; total, \$86,055.18. (b) Division of educational inquiry—General, \$9,246.43; study of legal education, \$7,432.64; study of the training of teachers, \$36,509.89; total, \$53,188.96. Grand total, \$1,095,506.18.

The list of institutions associated with the foundation was increased by the addition of Cornell College, Iowa, on January 7, 1921; Converse College and Washington and Lee University, on April 8; and Fisk University on May 6.

It was decided by the executive committee that teachers in associated institutions who were ineligible under the free-pension plan, but who became contributors under the contractual plan, should have all the advantages of disability and guaranteed interest that are provided by the foundation. The committee approved a new form of application for allowances on the basis of total permanent disability. It ruled that officers or teachers primarily engaged in university extension work were not eligible to the pension system. It ruled that librarians and associate and assistant librarians were eligible for allowances, but that reference librarians, classifiers, cataloguers, superintendents of circulation, and library assistants were not eligible. At the request of a number of organizations in the field the committee authorized a study of dental education. The president was authorized to make such inquiry as seemed to him wise in response to a request from the Commission on Medical Education in Virginia and to cooperate with a study of colleges being made by the Association of Colleges and Preparatory Schools of the Middle States and Maryland.

The report treats at length the relation of medical education to medical progress. In the recommendations for further improvement in medical teaching the report says that there is still need for a reorganization of the curriculum, for a determination of the number of schools needed in the country, and provision for their support.

In many schools, it is said, while the sciences are taught by trained teachers, the professional, clinical, and surgical subjects are taught by practitioners with little teaching experience. Faculty conferences on teaching procedure are suggested as a remedy for this.

"The medical curriculum of to-day is merely that of 50 years ago," the report states, "overlaid with one specialty after another until the load upon the student is almost intolerable. This curriculum must be entirely remade, from the standpoint of practice rather than theory."

Among the improvements noted in the report is the closer relationship between medical schools and hospitals, the elimination of the weaker and less prominent schools, and the development by the

National Board of Medical Examiners of improved examinations which now admit to practice in more than 20 States.

In the domain of research the report concludes that too many people are distracted by the importance of this field away from teaching. "Increasing expenditure for research has shown chiefly that the source of fruitful research lies not so much in subsidies as in the inspiration of gifted men." As regards college entrance requirements, the report says that "after years of effort the custom of requiring graduation from a four-year high school is now established. At the same time there has been a decrease in the proportion of the requirements for entrance that is definitely prescribed as to subjects."

The report also discusses the training of teachers and comments upon the importance of the resolutions of the American Bar Association in regard to law-school standards and bar admission requirements. In regard to the former subject attention is called to the fact that "a conspicuous recent change has involved the elimination in several States of the traditional and somewhat anomalous term 'normal school' and the formal substitution of the more appropriate title 'teachers' college.' Only one (Rhode Island) appears to have been attracted by the still better name, 'college of education,' in spite of its better form as well as its natural parallels in other types of professional training, such as medicine, law, and engineering. The teacher would be the gainer by a coordination of this sort in the case of junior and undergraduate professional training, just as 'schools of education' conform to the accepted terminology for senior and graduate organizations. California, Illinois, Minnesota, Missouri, Nebraska, Oklahoma, and Rhode Island have thus rechristened their training institutions, usually granting them the right, if not already enjoyed, of conferring degrees. Massachusetts has bestowed the latter right upon its normal schools without altering their name."

JEANES FUND.

The Anna T. Jeanes Fund was created for the improvement of negro rural schools. According to information furnished by Dr. James H. Dillard, president, the fund cooperated during the session ending June 30, 1921, with public-school superintendents in 269 counties in 13 States.

The 272 supervising teachers, paid partly by the counties and partly through the Jeanes Fund, visited regularly in these counties 8,976 country schools, making in all 34,641 visits and raising for the purpose of school improvement \$394,737. The total amount of salary paid to the supervising teachers was \$214,033, of which the sum of \$119,746 was paid by the public-school authorities and \$94,287 through the Jeanes Fund.

The business of these traveling teachers, working under the direction of the county superintendents, is to help and encourage the

rural teachers; to introduce into the small country schools simple home industries; to give talks and lessons on sanitation, cleanliness, etc.; to promote the improvement of schoolhouses and school grounds; and to organize clubs for the betterment of the school and neighborhood.

During the session ending June 30, 1922, the fund cooperated with public-school superintendents in 273 counties. The work in four of these counties was subsequently taken over by the State.

The 275 supervising teachers visited regularly in these counties 7,850 country schools, making in all 33,921 visits and raising for the purpose of school improvement \$428,528.39. The total amount of salary paid to the supervising teachers was \$207,287.75, of which the sum of \$114,521.51 was paid by the public-school authorities and \$92,766.24 through the Jeanes Fund.

JOHN F. SLATER FUND.

The following appropriations covering the year 1921-22 were made by the education committee of the John F. Slater Fund: County training schools, \$23,000; special work, \$1,000; city schools, \$4,000; Hampton Institute, \$5,000; Tuskegee Institute, \$5,000; private secondary schools, \$14,000; colleges, \$17,000; total, \$69,100. Statistics showing the work of the county training schools for the session ending 1922 are as follows: Number of schools, 156; number of teachers, 964; pupils in high-school grades, 3,782; salary from public tax fund, \$401,949; salary through Slater board, \$59,750; average amount for salaries from public funds, \$2,577; amount contributed by General Education Board for building and equipment, \$62,000; total amount for session 1921-22 from public tax funds, \$657,911.

These county training schools are, perhaps, the most significant feature in the work of negro education in the South at the present time.

THE PHELPS-STOKES FUND.

The Phelps-Stokes Fund was established under the will of the late Caroline Phelps Stokes, who died in 1909. The act of incorporation (1911) authorized the trustees to carry on housing activities and to help in "the education of negroes, both in Africa and the United States, North American Indians, and needy and deserving white students." The predominant interest of the fund to date has been the education of the negro. The capital of the fund is approximately \$1,000,000. Its offices are in New York City.

According to data furnished by Dr. Anson Phelps Stokes, secretary, the chief activity of the Phelps-Stokes Fund during the biennium under review has been the educational survey of Africa, made in

¹ Proceedings and reports of the John F. Slater Fund for year ending Sept. 30, 1921.

cooperation with foreign mission societies of America and Europe. The African Education Commission, authorized early in 1920, and headed by Dr. Thomas Jesse Jones, educational director of the fund, spent nearly a year in field work in Africa and has recently issued its report.³

The study of education in Africa owed its origin to the conviction, long held by the mission boards, that missionary education for the natives of Africa would profit by a thorough inquiry; to the desire of the trustees of the Phelps-Stokes Fund, in accordance with the express wish of the founder, to "render some concrete aid to the cause of native education in Africa"; and to the situation created by the provision for "mandatories" for backward peoples, following the World War, whereby attention was drawn to the vital importance of adopting wise educational policies in Africa that would "tend to prevent interracial friction and to fit the natives to meet the actual needs of life." Since the most important work of the Phelps-Stokes Fund previously had been the preparation of the two-volume report on Negro Education, published by the United States Bureau of Education,⁴ it seemed especially fitting that the fund should apply the same methods of study that had proved helpful in improving educational conditions among American negroes to the members of their race in Africa.

The members of the African Education Commission were Dr. Thomas Jesse Jones, chairman; James Emman Kwegyir Aggrey, of the Fanti Tribe, Gold Coast, West Africa; Dr. Henry Stanley Hollenbeck, a medical missionary of the American board at Angola; Mr. and Mrs. Arthur W. Wilkie, missionaries of the United Free Church of Scotland; and Leo A. Roy, of New York City, who served as secretary of the commission. The members of the commission began their field work in Africa in the late summer of 1920, visiting Sierra Leone, Liberia, the Gold Coast, Nigeria, Cameroons, Belgian Congo, Angola, and South Africa. They visited all types of schools; came into close contact with many and varying African groups—"the educated and the uneducated, the barrister, the clerk, the preacher, the teacher, the farmer, the blacksmith, and the fisherman; the women and girls, in the homes and the schools;" and held conferences with representatives of trades and industry, "not only to obtain the views of all sorts of men, but to enlist the sympathy of every section of the community in the matter of education."

The report deals with the social and economic resources of Africa as the basis for an educational program; urges adaptation of educa-

³ Education in Africa. A study of West, South, and Equatorial Africa, by the African Education Commission, under the auspices of the Phelps-Stokes Fund and foreign missionary societies of North America and Europe.

⁴ *A Study of the Private and Higher Schools for Colored People in the United States*, Bulletin 1916, No. 38-39. Washington, Government Printing Office, 1917.

tion to individual and community needs, involving emphasis upon good health, effective use of environment, preparation for home life, recreation for the use of leisure time, character and religious life; outlines the types of secondary schooling, teacher training, training in trades and handicrafts, agricultural education, training of medical assistants, training of religious workers, college education and professional schooling that are regarded by the commission as essential; and describes in detail for each colony or territory visited the social and economic background, the existing provision for education, and the steps necessary to make it more nearly adequate and more genuinely useful. The report insists above all upon the necessity of co-operation on the part of all the forces concerned in education—government, commercial and industrial concerns, missions, and the native people themselves—to the end that the human and material resources alike of Africa shall be developed for the common good.

The commission has encouraged the visits of African teachers and workers to America, and some 15 or more have already come to see what is being done in American schools, especially in such institutions as Hampton and Tuskegee and the negro rural schools in the South. The fund has also facilitated attendance of several promising African students at American educational institutions.

In addition to the support of the African Education Commission and related activities, the Phelps-Stokes fund has continued to make small appropriations (usually in amounts ranging from \$200 to \$2,000) to schools and other organizations for negroes. Eleven educational institutions were thus aided in 1922, and the number has been increased to 13 for 1923. Appropriations totaling \$6,500 were also made for agencies working for improved race relations, particularly to the interracial commission, the university race commission, and the national urban league. The fund has also maintained fellowships in the sociology of the negro at the University of Virginia and the University of Georgia.

CHAPTER XXX.

WORK OF THE BUREAU OF EDUCATION FOR THE NATIVES OF ALASKA.

By WILLIAM HAMILTON, Alaskan Assistant, Bureau of Education.

The administration of the work of the Bureau of Education in Alaska involves great difficulties, arising principally from the remoteness of most of the schools, the enormous distances between the schools, the meager means of communication, and the severity of the climate.

In addition to maintaining schools for the children belonging to the aboriginal races of Alaska, the bureau aids entire native communities by extending medical relief, by maintaining sanitary methods of living, by fostering the commercial enterprises of the natives, by promoting the reindeer industry, and by relieving destitution.

The field force in Alaska in 1922 included 5 superintendents, 144 teachers, 8 physicians, 14 nurses, 5 nurses in training, 16 hospital attendants, and 7 herders in charge of reindeer belonging to the Government. Seventy schools were in operation, with an enrollment of 3,679. Orphanages were maintained at Kanakanak and Tyonek for the care of children left destitute by the epidemic of influenza which prevailed in those regions.

In the Alaskan native community the school is the center of all activity—social, industrial, and civic. The teacher is guide, leader, and everything else the community may demand. To be teacher in the narrow schoolroom sense is by no means all of the teacher's duties in Alaska. He must often be physician, nurse, postmaster, business manager, and community builder. He must have an inexhaustible stock of patience to enable him to submit, at any hour of the day or night, to the visits of natives who desire assistance or medical treatment. Exacting as the work is, it appeals to persons who possess in high degree the qualifications of self-denial and philanthropy. The results of the labors of self-sacrificing men and women, through a succession of years, are evident in the self-respecting, self-supporting communities which have replaced the squalid villages of former days.

The work extends throughout the Territory from the southernmost boundary to the northernmost cape. The majority of the villages in which the work is located are practically inaccessible during eight months of the year. The larger settlements have been reached, but there yet remain certain regions, especially difficult of access, into which the work has not been extended. Two of these regions were reached during the summer of 1921.

In the great delta between the mouths of the Yukon and Kuskokwim Rivers—a country of marshes and lakes—there are hundreds of Eskimos living in abject squalor. During July, 1921, a teacher and his wife were sent into this region with the materials for the erection of a school building, the equipment necessary for opening a school, and all the supplies needed for a year. Before the coming of winter precluded the possibility of outdoor activities, the teacher erected the building in which he and his wife must live and to which they must attract the primitive people of the region for instruction in everything pertaining to a higher plane of living. Teachers were also sent to Sleetmute, a primitive village on the upper waters of the Kuskokwim River.

School buildings were also erected at Noorvik, in Arctic Alaska, to replace a small log school building erected by the Eskimos themselves, and on St. Lawrence Island, in Bering Sea, where the schoolhouse erected by the carpenter of the *U. S. S. Bear*, with the assistance of the Eskimos, in 1891, had become inadequate; and at Eek, an Eskimo village in western Alaska, the portable building which had been sent to that place having become too small to accommodate the school. It was necessary to send from Seattle to their remote destinations all of the materials for use in constructing these buildings.

The bureau maintains hospitals at Juneau, Kanakanak, Akiak, Nulato, and Noorvik. The hospitals, physicians, and nurses serve only the more thickly populated districts. In the vast outlying areas the teachers must of necessity extend medical aid to the best of their ability. Accordingly, teachers in settlements where the services of a physician or nurse are not available are supplied with household remedies and instructions for their use.

Reindeer herds are now distributed among the principal native settlements from Point Barrow to the Alaska Peninsula. It is estimated that there were in Alaska June 30, 1922, approximately 259,000 reindeer, two-thirds of which belong to the natives and one-third to the Government, to white men, and to Lapps.

There have been two notable extensions of the reindeer service. On the untimbered slopes of the region tributary to the Alaska Railroad there is unlimited pasturage for reindeer. In order to

establish the reindeer industry in this region a herd of 1,352 reindeer has been driven by herders in the employ of the bureau approximately 1,000 miles from a point on the Bering Sea coast to grazing grounds in the vicinity of the railroad. Hitherto the exportation of reindeer meat has been confined to shipments from the Nome region to Seattle only during the short season of open navigation in mid-summer. The Alāska Railroad will provide unlimited means of transportation for reindeer meat and hides from the interior to the coast at any time of the year.

In the autumn of 1921 the Coast Guard cutter *Unalga* transported for the Bureau of Education a herd of 54 reindeer from the Alaska Peninsula to Kodiak Island. The western half of Kodiak Island is untimbered and abounds in grazing lands on which great herds of reindeer can be supported. Through its system of distribution of reindeer the bureau will provide the natives of Kodiak Island with a source of food and establish a future industry for the island from whose ice-free harbors reindeer meat and hides can be readily exported.

The magnitude and value of the reindeer industry resulted in 1920 in the making by Congress of an appropriation to enable the Bureau of Biological Survey, Department of Agriculture, in cooperation with the Bureau of Education, to make investigations, experiments, and demonstrations for the improvement of the reindeer industry in Alaska. The distribution of reindeer among the natives and the use of the enterprise as the form of industrial education best adapted to the races inhabiting the untimbered regions of Alaska remain under the supervision of the Bureau of Education.

With few exceptions the native villages in Alaska in which the Bureau of Education's work is carried on are not on the routes of steamers which visit the larger settlements. Transportation of appointees and supplies to the remoter places has been secured only with difficulty and by the payment of heavy charges to small trading schooners going to these regions at infrequent and irregular intervals. This is a precarious, inadequate, and expensive procedure.

In compliance with the request for a vessel suitable for use by the Bureau of Education in its Alaskan work the Navy Department transferred to the Department of the Interior the U. S. S. *Boxer*, a wooden vessel with a carrying capacity of 500 tons and admirably adapted for the purpose contemplated. Funds to cover the expenses of installing an engine and reconditioning the vessel were provided in the Interior Department appropriation act, approved May 24, 1922.

By means of the *Boxer* the Alaska division will be able to make its own plans for the economical transportation from Seattle of its appointees and of supplies for its schools, hospitals, and reindeer stations. On its southward voyage it can bring out teachers whose terms of service have expired and carry for Eskimo herders reindeer meat which they wish to sell in the States. It can carry timber from forested regions to the timberless sections. It can distribute coal among the various settlements. It can be used as a school of navigation and seamanship for young native men.

INDEX.

- Abbott, Julia W., Kindergarten education, 389-401.
Administration, school. *See* School administration, 97-101.
Adult education, 216-219.
Africa, educational survey, 635-636, 761-763.
Agricultural and mechanical colleges, extension work, 220-222; legislation, 61; preparation of teachers, 482-483.
Agricultural education, 154-156, 291-311.
Agricultural experiment stations, Purnell bill, 86-87.
Akron, Ohio, research bureau, 102.
Alabama, school support, 134.
Alaska, education, 765-768.
American Association of University Professors, report on status of women in college and university faculties, 74-75.
American Bar Association, higher standards of admission to bar, 65-66.
American Council on Education, meeting, 68-74.
American Historical Association, report on civics and history, 409-410.
American Physical Education Association, journal, 184.
American Public Health Association, work, 182-184.
American Red Cross, school health activities, 177.
American School Hygiene Association, work, 185.
American Social Hygiene Association, work, 193-194.
American Students' Health Association, activities, 185.
American University Union in Europe, activities, 89-90.
Americanization work, 57-58, 637-678.
Arizona, school expenditures, 16; school support, 134.
Arkansas, educational survey, 600-602; survey of higher education, 633-634.
Army, vocational education, 362-363.
Army alpha tests, 578-587.
Army beta tests, 587-589.
Art education, 419-438.
Association of American colleges, activities, 67, 68.
Association of American Law Schools, standards required, 67.
Association of Colleges and Preparatory Schools of the Middle States and Maryland, work, 65.
Association of Colleges and Secondary Schools of the Southern States, work, 64.
Association of Land-Grant Colleges, convention, 306-310.
Atlanta, Ga., school survey, 627-628.
Aydelotte, Frank, on Rhodes' scholars, 94-95.
Baldwin, Bird T., Educational research, 489-504.
Baltimore, Md., school survey, 616-617, 620-622.
Bawden, William T., Vocational education, 343-368.
Binet tests, 570-578.
Binghamton, N. Y., school survey, 612-613.
Boise, Idaho, school survey, 615-616.
Boy Scouts, instruction in hygiene, 176-177.
Boyd, Charles N., on music schools, 454-459.
Brown, Walter H., on "school health" demonstration, 190.
Buchner, Edward F., Educational surveys, 593-636.
Buffalo, N. Y., salary of superintendent, attempt to reduce, 97-99.
Buildings, grounds, and equipment, researches, 497-498. *See also* School buildings.
Bureau of Educational Experiments, nutrition studies, 190-191.
Burgess, Prof., on general effect of the Rhodes scholars on American life, 93-94.
Business administration, Iowa State College, 261-262.
Caldwell, N. J., school survey, 622.
California, Americanization work, 654-657, 677-678; corporation tax, 27; inheritance tax, 28; school costs, 16-17; school fund, 23; school support, 134.
Calvin, Henrietta W., Home economics education, 369-387.
Cambridge University, adult educational work, 217-218.
Canada, admission of students to American colleges and universities, 72-73.
Carnegie Foundation for the Advancement of Teaching, study on training for law, 76-78; work, 758-760.
Chautauqua movement. *See* Summer schools.
Chicago school research bureau, 102.
Child Health Organization of America, activities, 177-178.
Citizenship, education for, 72.
City school systems, significant movements, 97-124.
Civics, education, 403-418.
Cleveland Heights, Ohio, school survey, 628.
"College," definition of term, 69.
College curriculum, reorganization, 67-68.
College Entrance Examination Board, work, 63-64; report on history and civics requirements, 407-408.
College entrance requirements, studies, 79-82.
Colleges and universities, home economics, 373-379; residence of students, 84-85; salaries of instructors, 85-86; solution for growth in number of students, 82-84; standardization, 68-70; student credentials from foreign countries, 72-74; teacher training courses, 483-485. *See also* Educational extension; Engineering education; Higher education.
Colorado College, survey, 634.
Columbia University, intelligence tests, 83-84.
Colvin, Stephen, Educational tests, 565-592.
Colwell, N. P., Medical education, 273-289.

- Commonwealth Fund, health work, 192.
 Compulsory school attendance, legislation, 36-40.
 Connecticut, Americanization work, 667-669; school fund, 19-20; school support, 134.
 Consolidation of schools, legislation, 54-55; rural, 147-152.
 Cook, Katherine M., Rural education, 125-159.
 Corporation taxes, 27.
 Correspondence courses, 212-215.
 Correspondence schools, vocational education, 365-366.
 Costs and finances, researches, 496-497. *See also* School costs.
 Councils, teachers, 111-113.
 County as a unit of organization, 29-31.
 County boards of education, legislation, 41-43.
 County superintendents and rural supervision, legislation, 43-45.
 Courses of study, rural schools, 158-159; researches, 510.
 Davidson, William, on platoon schools, 117.
 Dawson, Edgar, social studies in civic education, 403-418.
 Deffenbaugh, W. S., Secondary education, 313-342; Significant movements in city school systems, 97-124.
 Delaware, Americanization work, 662-665; inheritance tax, 28; training for teachers of adult immigrants, 649-651.
 Department of Agriculture, home economics work, 384-385.
 Department of Education, favored by American Council on Education, 71.
 Detroit, Mich., art education, 430-431.
 Drawing, research work, 529.
 Earhart, Will, Recent advances in instruction in music, 439-459.
 Educational associations. *See under names of associations.*
 Educational boards and foundations, activities, 755-763.
 Educational extension, 197-228.
 Educational finance inquiry, 71.
 Educational information service, 467-470.
 Educational opportunity, equalizing, 132-137.
 Educational periodicals, list, 471-474.
 Educational research, 459-564.
 Educational surveys, 593-636.
 Educational tests, 120-121, 565-592.
 Egbert, James C., University summer schools, 226, 229-240.
 Eliot, Charles P., on art education, 438.
 Elizabeth City, N. C., school survey, 622-623.
 Elizabeth McCormick Memorial Fund, work, 188-189.
 Engineering education, 241-272.
 English, research work, 521-522.
 Enrollment, researches, 498.
 Evans, Henry R., Educational boards and foundations, 755-763.
 Expenditures, public schools, 3-9.
 Experimental schools, 494.
 Extension work. *See* Educational extension.
 Extra curricular activities, high schools, 324-329.
 Eyesight Conservation Council, work, 188.
 Farnum, Royal B., Art education: The present situation, 419-438.
 Federal aid to education, 11-15, 86-87.
 Federal Board for Vocational Education and home economics education, 385; provisions, 14; work, 348-352.
 Fellowships, international, 90-91.
 Finance, public school, 1-34.
 Foreign languages, research work, 523-525.
 Foundations, educational. *See* Educational boards and foundations.
 France, admission of students to American colleges and universities, 73-74.
 Frasier, George W., on city school administration, 100-101.
 General Education Board, work, 755-757.
 Georgia, school revenue, 17; school survey, 606-608.
 Gilmore, Lee, on platoon schools, 118.
 Gosling, T. W., on best plan for securing junior high-school teachers, 337-338.
 Great Britain, students, admission to American colleges and universities, 72-73.
 Greene, Arthur M., Jr., Engineering education after the war, 241-272.
 Group tests, 589-592.
 Hackensack, N. J., school survey, 623-624.
 Hamilton, William, Work of the Bureau of Education for the natives of Alaska, 765-768.
 Handwriting, research work, 515-516.
 Haney, James P., on art education, 433-434.
 Hawaii, educational survey, 605-606.
 Health education, 161-196.
 High-school facilities, rural children, 152-154.
 High-school fraternities, 326-328.
 High schools, art instruction, 431-435; curriculum for small classes, 329-333; home economics, 373-378; music, 442-443; rural, agricultural education, 154-156; training for teachers, 479-480. *See also* Secondary education.
 Higher education, 63-95; cost, 86; legislation, 60; surveys, 632-635. *See also* Colleges and universities; Universities.
 Hill, Robert T., on workers' education, 225-226.
 Hirsch, William F., Educational work of the Young Men's Christian Association, 693-717.
 History, teaching, 413-415.
 Home and neighborhood classes, 645-647.
 Home economics education, 369-387.
 Home study, 207-208.
 Honesdale, Pa., school survey, 623.
 Honor societies, high schools, 328-329.
 Hood, William R., Some important school legislation, 35-61.
 Hygiene, educational, 161-196.
 Illinois, school support, 134.
 Illiteracy, 2.
 Immigrant education, financing, 651-653.
 Income taxes, 27.
 Indiana, educational survey, 603-606; school support, 134.
 Industrial arts, education, 428-429.
 Inheritance taxes, 28.
 Institute of International Education, work, 88-89.
 Instrumental music, instruction in public schools, 446-449.
 Intelligence tests, 120-121; Columbia University, 83-84; effectiveness, 84.
 Interdepartmental Social Hygiene Board, work, 195-196.
 International fellowships and scholarships, 90-91.
 Iowa, school survey, 600.

- Iowa State College, business administration, 261-262.
- Jeanes Fund, work, 760-761.
- John F. Slater Fund, work, 761.
- Johns Hopkins University, home economics courses, 384.
- Journalism, educational, 461-474.
- Junior high schools, 123, 333-342.
- Kentucky, educational survey, 599-600; inheritance commission, 28; inheritance tax, 28.
- Kindergarten education, 389-401.
- Kindergartens, legislation, 58; research work, 529.
- Knights of Columbus, educational work, 719-730.
- Land-grant colleges. *See* Agricultural education.
- Latin America, students, admission to American colleges and universities, 73.
- Law schools, higher standards of admission to bar, 67; report by Carnegie Foundation for the Advancement of Teaching, 76-78; requirements, 67.
- Lawrence, Kans., school survey, 618.
- Legal education, higher standards of admission to bar, 65-66.
- Legislation, Americanization work in Massachusetts, Ohio, and California, 675-678. *See also* School legislation.
- Libraries. *See* Package library service.
- Lombard, Ellen C., Recent development of parent-teacher associations, 679-692.
- Los Angeles, Calif., art education, 431.
- Louisiana, taxation for schools, 17, 27-28.
- Louisiana State Normal College, extension work, 222.
- Mahoney, John J., Americanization in the United States, 637-678.
- Maine, school fund, 20-22; school support, 134.
- Manual arts instruction, 367-368.
- "Mansfield demonstration," health education, 189-190.
- Maple, Charles G., Educational extension, 197-228.
- Maryland, music in public schools, 444-445; rural schools, 129; school building suspended during World War, 9; survey of higher education, 634.
- Massachusetts, Americanization work, 669, 674; art education, 429-430; educational extension, 204-206; income tax, 27; school fund, 18-19, 24-25; taxation for schools, 18.
- Mathematics, research work, 516-519.
- Medical education, 273-289.
- Melby, Mary C., on primary education, 124.
- Memphis, Tenn., school survey, 614-615.
- Mental hygiene, 186-187.
- Mental tests, general review, 565-592.
- Merrill-Palmer School, home economics, 383.
- Methods of learning and teaching, researches, 506-508.
- Methods of study, researches, 509-510.
- Michigan, rural schools, 131; school fund, 21.
- Milbank Memorial Fund, health work, 192.
- Minnesota, occupation tax, 28; school expenditures, 16; school fund, 21; school survey, 608-609.
- Mississippi, school fund, 21-22; school support, 134.
- Missouri, school support, 134; school survey, 631-632.
- Mohank Health Education Conference, activities 179-180.
- Montana, inheritance tax, 28.
- Moral education, legislation, 56-57; research work, 531-534.
- Morrill Act. *See* Federal aid to education.
- Music, appreciation, 449-450; recent advances in instruction, 439-459; research work, 528-529; schools, 457-459.
- National Child Health Council, work, 189.
- National Child Labor Committee, surveys of health conditions, 191.
- National Committee for Mental Hygiene, work, 186-187.
- National Committee for the Prevention of Blindness, work, 187-188.
- National Conference Committee on Standards of Colleges and Secondary Schools, work, 74.
- National Congress of Mothers and Parent-Teacher Associations, development, 680-684; health programs, 191.
- National Education Association, investigation of school costs, 3.
- National Physical Education Service, work, 181-182.
- National Research Council, work, 75-76.
- National Tuberculosis Association, work, 180-181.
- National University Extension Association, work, 201-203.
- Navy, vocational education, 364-365.
- Nebraska, school support, 135.
- Nevada, school fund, 26.
- New Bedford, Mass., school survey, 626.
- New England College Entrance Certificate Board, work, 64.
- New Hampshire, school fund, 23.
- New Jersey, control of school funds, 99; school support, 135.
- New York City, art courses in high schools, 432-433; dual control, 100.
- New York Nutrition Council, work, 186.
- New York State, Americanization work, 659-662; appropriations for teachers' salaries, 17; art education, 426-428; music in public schools, 445; school survey, 609-611; training for teachers of adult immigrants, 648-649.
- Newspapers and education, 465-467.
- Newton, Mass., teachers' salaries, 106-107.
- Niagara Falls, N. Y., school survey, 619.
- Normal schools, 478-481, 222. *See also* Teachers; Teacher training.
- North Carolina, educational survey, 599; expenditures for public schools, 17; rural schools, 129-131.
- North Central Association of Colleges and Secondary Schools, work, 64.
- Nutrition clinics, delicate children, 186.
- Nutrition in education, 185-186.
- Oakland, Calif., special classes, 121-122.
- Occupation taxes, 28.
- Ohio, Americanization work, 667-669, 676-677; music in public schools, 444; school survey, 608, 632; training for teachers of adult immigrants, 649.
- Oklahoma, educational survey, 602-603.
- Oregon, school fund, 26; school support, 135.
- Organization and administration, researches, 499-503.
- Package library service, 216-217.
- Paducah, Ky., school survey, 613-614.
- Pageants, 435-437.

- Palmer, O. T., on ventilation of schoolhouses, 169.
 Parent-teacher associations, development, 679-692.
 Parochial schools, legislation, 59-60.
 Part-time school, 352-357.
 Pennsylvania, art education, 430; educational extension, 206-207; music in public schools, 443-444; program of civics, 405-407; rural schools, 131; school support, 135; school survey, 606; teachers' salaries, 17.
 Periodicals, dealing with educational research, 494-495; educational, 471-474.
 Phelps-Stokes Fund, work, 761-763.
 Philadelphia, Pa., school survey, 624-626.
 Physical education, 169-174.
 Physical welfare, school children, legislation, 55-56.
 Platoon school. *See* Work-study-play school.
 "Pre-vocational education," definition, 360.
 Primary education, 124.
 Private schools, legislation, 59-60.
 Professors' salaries, colleges and universities, 85-86.
 Public Health Service, activities, 194-195.
 Public school finance, survey, 1-34.
 Public schools, music, 439-453.
 Publicity, educational, 476-471.
 Pupil self-government, high schools, 322-323.
 Purnell bill, agricultural experiment stations, 86-87.
 Radio education, 226-228.
 Reading, research work, 510-515.
 Rehabilitation of United States World War veterans, 87.
 Research bureaus, 101-103, 491-494.
 Research work, bibliography, 540-564; educational, 489-564.
 Reserve Officers' Training Corps, activities, 87-88.
 Retardation and elimination, researches, 499.
 Revenue, school. *See* School revenue.
 Rhode Island, school support, 135.
 Rhodes' scholars, 91-94.
 Rockefeller Foundation, work, 757-758.
 Rural schools, agricultural education, 154-156; growth and progress, 125-159.
 Ryan, W. Carson, Jr., Recent developments in educational journalism, 461-474.
 Scholarships, international, 90-91.
 School attendance, researches, 498.
 School buildings, 113-115; expenditures, 9-11; legislation, 48-49; rural, 156-158; surveys, 628-629.
 School costs, growth, 3-9.
 School funds, California, 23; Colorado, 20; Connecticut, 19-20; declining importance, 25-26; Maine, 20-22; Massachusetts, 18-19, 24-25; Michigan, 21; Minnesota, 21; Mississippi, 21-22; Nevada, 26; New Hampshire, 23; New Jersey, 90; Oregon, 26; reforms in apportioning, 22-25; Texas, 26; Utah, 26; Wyoming, 26.
 School health supervision, 162-167.
 School legislation, 35-61.
 School plant, hygiene, 167-169.
 School revenue, new sources, 26-28.
 School surveys, 535-540, 593-630. *See also* under cities, towns, and States.
 School system, unification, 122-124.
 School term, legislation, 54.
 Science, research work, 527-528.
 Scott, Walter D., on intelligence tests, 84.
 Secondary education, 46-47, 313-342. *See also* High schools.
 Seerley, Homer H., *The American teacher*, 475-488.
 Seligman, Edwin R., on educational budget, 32.
 Severance taxes, 27.
 Shreveport and Caddo Parish, La., school survey, 627.
 Small, Willard S., Educational hygiene, 161-196.
 Smith-Barbkhead Act. *See* Federal aid to education.
 Smith-Hughes Act. *See* Federal aid to education.
 Smith-Lever act. *See* Federal aid to education.
 Smith-Sears Act. *See* Federal aid to education.
 Smith-Towner bill. *See* Federal aid to education.
 Social hygiene, and education, 193-196.
 Social studies, civic education, 403-418; research work, 529-531.
 Society of College Directors of Physical Education, work, 184-185.
 South Dakota, Americanization work, 665-667.
 Spain, Charles L., on platoon schools, 117.
 Sparta, Wis., school surveys, 626.
 Special classes, 121-122.
 Speech, research work, 523.
 Spelling and vocabulary, research work, 519-521.
 Springfield, Mass., teachers' salaries, 98-99.
 Stanford-Binet test. *See* Binet tests.
 State agricultural colleges, preparation of teachers, 482-483.
 State departments of education, legislation, 40-41.
 State policies, public school finance, 15-19.
 Students, colleges and universities, residence, 84-85; credentials from foreign countries, 72-74; foreign, in United States, 95.
 Students Army Training Corps, organization and work, 241-251.
 Summer schools, university, 229-240.
 Superintendents' salary, Buffalo, N. Y., 97-99.
 Supervised study, high schools, 323-324.
 Supervision, rural schools, 137-138.
 Surveys of education. *See* Educational surveys; Schools surveys.
 Sweany, Mack J., Educational work of the Knights of Columbus, 719-730.
 Swift, Fletcher H., A survey of public school finance in the United States, 1-34.
 Taxation for schools, 25-28, 45-46. *See also* Corporation taxes; Income taxes; Inheritance taxes; Occupation taxes; Public school finance; and Severance taxes.
 Teacher-training, 52-53, 300-302, 477-488. *See also* Normal schools.
 Teachers, industrial, scholarships, 357-358; music, 452-453, 455-457; preparation, 477; qualifications, 110-111; qualifying for junior high schools, 336-338; rating, 107-108; rural schools, 138-147; survey of work of, 631-632; training for vocational agriculture, 300-302.
 Teachers' certificates, 40-50, 476-477.
 Teachers' colleges, State, 481-492.
 Teachers' councils, 111-113.
 Teachers' homes, legislation, 49.
 Teachers' Insurance and Annuity Association, report, 78-79.
 Teachers of adult immigrants, preparation, 648-651.
 Teachers' salaries, 103-107; average in United States, 8; legislation, 50-51; purchasing power, 8; rural schools, 143-145; Springfield, Mass., 98-99.
 Teachers' tenure, 51-52, 107-110.

- Teaching and supervisory staff, researches, 503-506.
 Tests, educational, 120-121, 555-562.
 Texas, music in public schools, 445-446; school expenditures, 17; school fund, 26; school support, 135.
 Textbooks, legislation, 53.
 Towner-Sterling bill. *See* Federal aid to education.
 Universities. *See also* Colleges and universities.
 University extension, 207-216, 223-225. *See also* Educational extension.
 University of Arizona, survey, 634-635.
 University of Indiana, package library service, 215-216.
 University of Minnesota, survey, 633.
 University of Tennessee, agricultural extension work, 220-222.
 University of Texas, engineering, 260-261.
 University of the State of New York, extension work, 207.
 University of Washington, legislation, 60.
 University of Wisconsin, engineering, 260.
 University summer schools, 229-240.
 Utah, school fund, 26; school support, 135; taxation for schools, 17.
 Utica, N. Y., school survey, 613.
 Ventilation, school buildings, 168-169.
 Vermont, school support, 135.
 Virginia, inheritance tax, 28; school survey, 597-599.
 Vocational education, 11, 318-320, 343-368.
 Vocational guidance, 360-361, 534-535.
 Vocational rehabilitation, legislation, 58-59.
 Vocational subjects, research work, 525-526.
 Washington, school expenditures, 17.
 Washington, D. C., school survey, 616.
 West Virginia, school support, 135.
 West Virginia University, engineering, 260.
 Wheeler, U. G., on teachers' salaries, 106-107.
 Wheeling, W. Va., school survey, 618-619; teachers' requirements, 111.
 Wilmington, Del., school survey, 619-620.
 Winchester, Va., school survey, 611-612, 617-618.
 Winslow, Leon L., objectives of art and industrial arts education, 428-429.
 Wisconsin, school support, 135.
 Women, status in college and university faculties, 74-75.
 Work-study-play school, 115-120.
 Workers' education, 225-226.
 Workers' Educational Bureau of America, activities, 219.
 Works, George A., agricultural education, 291-311.
 World Association for Adult Education, work, 218-219.
 World War, educational conditions revealed, 2-3.
 Wyoming, school fund, 26; school support, 135.
 Young Men's Christian Association, educational work, 693-717.
 Young Women's Christian Association, educational work, 731-754.
 Zook, George F., higher education, 63-65.

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